
GOLD AND SILVER.

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BY RICHARD P. ROTHWELL.

INTRODUCTION.

The statistics of an industry which in a single year has added to the wealth of the nation in a permanent, indestructible form about \$100,000,000, and which within a quarter of a century has increased the supply of the world's standards of value nearly \$2,000,000,000, are worthy the careful study of legislators, statesmen, and political economists in every country. With a full appreciation of the vastness of the subject and of the importance of accuracy in statements of such far-reaching influence, it has been sought to render these statistics of the precious metal industry in the United States in the calendar year 1889 full and reliable, especially from the fact of the controlling influence which must necessarily be exerted by the United States as the producer of nearly 28 per cent of all the gold and 41 per cent of the world's entire output of silver. It has also been deemed essential to the usefulness of this report to include in it a discussion of the various conflicting statements of the production of gold and silver in previous years, both in the United States and in all other countries, and to point out as far as possible, from a careful study of the world's statistics, the causes for the great and rapid decline in the market value of silver in recent years and the probable future of that value. These are the most important questions in the precious metal industry, not only to a vast investment in this country, but as affecting the financial policy of the whole civilized world. It has seemed well, therefore, to devote much space to this subject and much study to the facts which census investigations have established.

The successful accomplishment of this investigation has been due to the earnest efforts of many assistants. The principal assistant, Mr. William Kent, has had charge of the work, and has given valuable assistance in the study of the literature of the statistics of gold and silver production. The important duties involved in the care of the finances of this investigation and the general administration of the office were confided to Mrs. Sophia Braeunlich, business manager of the Engineering and Mining Journal. Her devotion and great business ability have contributed largely to the success of the work.

The greatest attention has been devoted to tracing to its source the output of the metals, so that the importance not only of each state, but of each producing county of a state, may be recognized.

The importance attached to the labor statistics has been less than to that of production only because of the impossibility, from the very nature of the industry, of obtaining absolutely exact data on this subject. The fact that much of the gold and the greater part of the silver is now obtained from ores produced or treated for lead or copper, the labor statistics of which naturally come within the statistics of these metals, renders a just apportionment of the labor and capital employed in the production of each metal impossible where the statistics of all have not been collected by the same special agent. Nevertheless, the statistics showing the number of men and the capital employed in the production of the precious metals have received the most careful attention, and are believed to be accurate within narrow limits.

The number of gold and silver mining "claims" or "locations", commonly called "mines", in the United States is practically beyond computation. The names of nearly 100,000 of such claims or mines were received by the Census Office, but upon limiting the investigation to (1) producing mines, (2) mines working but not producing, (3) mines temporarily stopped, but which had produced or upon which the work done had established their value and which could properly be classed as mines, the list declined to perhaps 10,000, and upon tabulating only such mines as made returns of production or labor statistics the list was reduced to 6,004, which is still a very large number compared with the other mineral-producing mines in the United States. Of these final reports, 43 per cent in number were reported direct through correspondence; the balance was collected by agents in the field. It is confidently believed that with time and continuous effort the reports of probably 80 per cent of all the producing mines could be secured by correspondence. This, however, would still leave the necessity for employing agents in the field to collect the remaining 20 per cent.

The results of the census investigation of the precious metal industry in 1889 are summarized on the following page.

MINERAL INDUSTRIES IN THE UNITED STATES.

PRODUCTION OF BULLION.

| METALS. | Ounces. | United States coining value. (a) |
|--------------|--------------|--|
| Total | | \$99, 283, 732 |
| Gold | 1, 500, 809 | 32, 886, 744 |
| Silver | 51, 354, 851 | 96, 396, 988 |

a Coining value of 1 ounce of fine gold, \$20.6721+; coining value of 1 ounce of fine silver, \$1.2929+.

NUMBER OF EMPLOYÉS, AVERAGE WAGES PAID, AND AVERAGE NUMBER OF DAYS EMPLOYED PER YEAR.

| EMPLOYÉE. | Number employed. | Average wages per day. | Average number of days em- ployed per year. | Average wages per year. |
|----------------------------------|---------------------|------------------------------|---|-------------------------------|
| Grand total | 57, 307 | | | |
| Above ground: | | | | |
| Foremen or overseers | 1, 585 | \$4. 04 | 216 | \$873 |
| Mechanics | 3, 273 | 3. 07 | 244 | 895 |
| Laborers | 17, 085 | 2. 61 | 195 | 480 |
| Boys under 16 years of age | 82 | 1. 16 | 109 | 231 |
| Total | 22, 025 | | | |
| Below ground: | | | | |
| Foremen or overseers | 1, 352 | 4. 16 | 238 | 900 |
| Miners | 29, 144 | 3. 12 | 236 | 730 |
| Laborers | 3, 870 | 2. 46 | 244 | 600 |
| Boys under 16 years of age | 43 | 1. 51 | 208 | 314 |
| Total | 34, 409 | | | |
| Office force | 873 | | | |

Average output per person employed per annum, \$1,732; average earnings, \$729.

EXPENDITURES.

| | |
|--------------------------------|----------------|
| Total wages paid in 1889 | \$40, 412, 022 |
| Paid to contractors | 1, 421, 301 |
| Paid to office force | 1, 347, 373 |
| Total | 43, 180, 696 |
| Value of supplies | 13, 817, 739 |
| Other expenditures | 6, 452, 701 |
| Grand total | 63, 451, 136 |

VALUE OF MINING PLANT.

| | |
|--|---------------|
| Buildings | \$7, 565, 918 |
| Railroads on surface | 1, 475, 674 |
| Machinery | 14, 985, 215 |
| Underground improvements | 95, 806, 648 |
| Mine supplies | 3, 919, 480 |
| Cash | 4, 112, 810 |
| Estimated value of mines, exclusive of the above items | 338, 094, 821 |
| Total value of mining plant | 465, 960, 566 |

VALUE OF MILLS AND REDUCTION WORKS.

| | |
|--------------------------------------|---------------|
| Buildings | \$5, 685, 562 |
| Machinery | 13, 456, 938 |
| Supplies | 1, 220, 272 |
| Total | 20, 362, 772 |
| Total value of mines and works | 486, 323, 338 |

MOTIVE POWER.

| POWER. | Number. | Horse power. |
|--------------------|---------|-----------------|
| Boilers | 2, 034 | 78, 343 |
| Engines | 1, 364 | 55, 122 |
| Other motors | 623 | 18, 821 |
| Animals | 3, 945 | |

RELATIVE IMPORTANCE OF PRODUCING MINES.

| | NUMBER. |
|---|---------|
| Mines reported producing less than \$1,000 bullion..... | 1,610 |
| From \$1,000 to \$10,000..... | 1,408 |
| From \$10,000 to \$50,000..... | 437 |
| From \$50,000 to \$100,000..... | 95 |
| From \$100,000 to \$250,000..... | 107 |
| From \$250,000 to \$500,000..... | 44 |
| Over \$500,000..... | 28 |
| Total..... | 3,729 |
| Mines reported working but not producing bullion..... | 1,009 |
| Mines reported idle..... | 1,266 |
| Total number of mines reported..... | 6,004 |

The details for the statistics thus summarized are given in the following pages in due sequence.

From these statistics it appears that the labor employed in the actual production of the precious metals is both extremely well paid and very productive—better paid and more productive, in fact, than in any other industry thus far (May, 1891) reported.

The average earnings of all persons employed at the gold and silver mines (57,307) was \$729 a year, while the average output per man amounted to \$1,732 a year. In the granite quarrying industry, according to the census report, the average value of the output per person employed in 1889 was \$648, and the average wages per annum \$431. In coal mining west of the Mississippi river the average value of output per person employed was \$675, and the average wages earned \$474.

The average earnings in the several classes of labor in 1889 and 1880 are compared in the following table. It should be stated that if miners and laborers under ground are classed together, as all classes of labor above ground are, the average wages earned under ground would be \$3.04 per day as compared with \$2.51 per day above ground.

Miners generally work on contract, so much per ton, per foot of drift, or per cubic yard, while laborers under ground are paid by the day, which accounts for the great difference between the earnings of the two classes. It is well known that the average day wages paid in mining throughout the western states have largely declined during the past 10 years, owing to the reduced cost of living and greater number of wage workers since railroads penetrated the mining districts.

AVERAGE RATE OF WAGES IN GOLD AND SILVER MINING AT THE ELEVENTH CENSUS COMPARED WITH THE TENTH CENSUS.

| STATES AND TERRITORIES. | ELEVENTH CENSUS. | | | | | | TENTH CENSUS. | |
|-------------------------|------------------|------------|-----------|---------------|---------|-----------|---------------|---------|
| | Above ground. | | | Below ground. | | | Foremen. | Miners. |
| | Foremen. | Mechanics. | Laborers. | Foremen. | Miners. | Laborers. | | |
| The United States..... | \$4.04 | \$3.67 | \$2.51 | \$4.16 | \$3.12 | \$2.46 | | |
| Alabama..... | 3.00 | 1.50 | 0.90 | 3.00 | 1.25 | 0.83 | \$1.00 | \$1.00 |
| Alaska..... | 5.50 | 5.00 | 2.82 | 4.86 | 3.60 | 2.00 | | |
| Arizona..... | 4.59 | 3.89 | 2.46 | 4.44 | 3.17 | 2.24 | 5.00 | 4.00 |
| California..... | 3.30 | 3.26 | 2.05 | 3.49 | 2.74 | 2.28 | 5.00 | 3.25 |
| Colorado..... | 4.33 | 3.80 | 2.91 | 4.22 | 3.08 | 2.88 | 5.00 | 3.00 |
| Dakota..... | 4.57 | 3.23 | 2.85 | 4.75 | 3.49 | 2.99 | 5.50 | 3.50 |
| Georgia..... | 1.33 | 1.47 | 0.92 | 1.60 | 1.05 | 0.80 | 2.00 | 1.00 |
| Idaho..... | 4.64 | 4.04 | 3.04 | 4.79 | 3.59 | 3.10 | 5.00 | 4.00 |
| Maine..... | | | | | | | 2.00 | 1.50 |
| Maryland..... | 2.25 | | 1.05 | | 1.50 | 1.25 | | |
| Michigan..... | 3.25 | 2.25 | 1.61 | 2.25 | 2.00 | 1.86 | | |
| Montana..... | 5.39 | 4.14 | 3.25 | 5.11 | 3.48 | 3.13 | 5.00 | 3.50 |
| Nevada..... | 5.07 | 4.56 | 3.22 | 4.83 | 3.00 | 2.91 | 6.50 | 4.00 |
| New Hampshire..... | | | | | | | 3.00 | 1.50 |
| New Mexico..... | 4.09 | 3.50 | 2.31 | 4.15 | 3.15 | 2.26 | 4.50 | 2.75 |
| North Carolina..... | 2.27 | 1.44 | 0.88 | 2.26 | 1.02 | 0.85 | 2.00 | 1.00 |
| Oregon..... | 3.32 | 2.92 | 2.29 | 3.92 | 3.16 | 2.23 | 4.00 | 3.00 |
| South Carolina..... | 3.02 | 2.54 | 0.99 | 3.10 | 1.15 | 0.90 | | |
| Texas..... | 4.62 | 2.83 | 2.07 | 2.60 | 1.27 | 1.25 | | |
| Utah..... | 5.27 | 3.93 | 3.14 | 4.21 | 3.04 | 2.80 | 5.00 | 3.25 |
| Virginia..... | 1.38 | | 1.00 | | | | 1.25 | 1.25 |
| Washington..... | 5.00 | 4.00 | 3.00 | 4.69 | 3.43 | 3.28 | | 2.50 |
| Wyoming..... | 3.86 | 3.07 | 2.36 | 4.84 | 3.05 | 2.36 | 4.00 | 3.00 |

STATISTICAL METHODS.

The collection of statistics respecting the production of gold and silver is a work of great difficulty. Gold is produced in extremely small quantities by a vast number of independent miners, often from remote and almost inaccessible sources. An army of prospectors is scattered over the mountains of the western states and territories every year, who explore every cañon and river bottom by digging and panning, and when "pay gravel" is found will remain working it until the gold or water supply fails or the frosts of winter drive them back toward the abodes of civilization. Gold dust thus found is carried from time to time to the nearest store or village, where it is bartered for supplies, or it is taken to the nearest United States assay office and sold for coin. The prospector, as a rule, carefully conceals the source from which his gold came, fearing lest others might interfere with his "claim", to which he may expect to return and work year after year; though the prospector does not generally return to his old diggings, for he has an ineradicable belief that somewhere else than "here where it requires so much labor for so little gold", somewhere "across the range" or in some still more desolate cañon, the bonanza awaits him which will realize his dream of millions and reward him for all the hardships and dangers he has undergone.

The prospector scorns to work for day wages. The mirage of millions is always before his eyes, and he patiently, cheerfully, and bravely undergoes untold privations and hardship year after year which no mere stipulated reward would induce him to endure, while the value of the gold he actually obtains does not amount to even very modest wages, and frequently does not pay for the scanty provisions with which he supplements the game he shoots. The storekeeper frequently furnishes him the provisions, or, as he terms it, a "grub stake", for an interest in the "finds" he may make.

While the average annual production of each of these prospectors or miners is small, the aggregate amount is considerable; but no full or accurate statistics of this portion of gold production can be obtained. It is frequently impossible to find the prospectors and men who work small mines, or, when found, to get any reliable information from them. They sometimes can not tell how much gold they have produced during the preceding year, the days they worked, the cost of anything, or the value of the mine itself.

Gold is mainly produced by a few large accessible mines, from which it is easy to get statistical information; but the cost of production at such mines would not fairly represent that at small mines or by prospectors.

Since the state of California has practically prohibited hydraulic mining by forbidding the washing of any débris into the streams, the yield of gold has greatly diminished; it has declined far more, in fact, than the entire value of the agricultural lands of the state which could possibly be affected by the débris. It is true that some surreptitious gravel mining is still carried on in the mountains, but from the fact that it is illegal it is impossible to obtain reliable statistics concerning it.

Notwithstanding these many difficulties, which render the collection of full statistics of gold more difficult than those of any other mineral product, it is nevertheless true that the mere total production of the metal can be ascertained with considerable accuracy and ease, since nearly all the gold produced finds its way either to the United States mint or to a few private refineries who supply fine bars.

The director of the United States mint has for some years collected and published an annual report giving the total production of gold in the United States, computed from the deposits at the various mints and United States assay offices and from reports furnished by the private refineries, and from returns by producing properties, the whole checked by the disposition of the products. This report, of course, gives none of the important statistics of labor, supplies, value of mines and improvements, etc., which it was the object of the census investigation to secure; and even where the mint report attempts to distribute the product according to states and counties, still more where it assumes to give the output of individual mines, its figures are manifestly less reliable than required by a careful census of the mines, for while nearly all the gold finds its way to the mint the statistics relating to its production can be accurately obtained only by infinite labor and minute investigation.

The same is true in a less degree of the statistics of silver. This metal is now mainly produced in large mills or metallurgical establishments, which are quite willing to furnish the necessary statistics; but a much smaller proportion of the total silver than of the gold output goes through the mint, and a much larger proportion of it goes directly from the producer into commerce; consequently the figures of total production of silver as given in the mint report are less accurate than those of gold.

The mint reports are extremely valuable, and great credit is due to the director for the promptness with which this important statement of gold and silver production is published each year, and which would be greatly delayed if the work of collecting full statistics were undertaken.

The report on precious metals in volume XIII of the Tenth Census included elaborate reports of a technical character, among which were "A geological sketch of the states and territories of the Pacific division", by Mr. George F. Becker; "A sketch of the Rocky mountain division", by Mr. S. F. Emmons; "The mining industries of Utah", by Mr. D. B. Huntley; "The minting of gold and silver", by Mr. Albert Williams, jr., and "Lead smelting at Leadville, Colorado", by Mr. S. F. Emmons. It also included several minor sketches and reports on the mining and metallurgical methods adopted in the various districts, and various geological and technological data, together with statistical tables, such as the production of ore and bullion, rates of wages, etc.

The collection of statistics for the Eleventh Census is confined to ascertaining, first, the total production of gold and silver in the United States, showing the amount produced in each state and county; and, second, the importance of the industry as measured by (1) the number of persons it supports, (2) the wages earned by those engaged in the industry, and (3) the value of the mines and mining plant.

To furnish data for a correct understanding of the peculiar difficulties under which any census of the gold and silver industry must be conducted, as well as to show the extensive scope of the work undertaken by the census of 1880 and the methods used in it, and the reasons for curtailing that scope and adopting another method for the Eleventh Census, the following extract from the introduction of volume XIII of the Tenth Census is herein presented:

In undertaking the investigation of the statistics and technology of the precious metal industry of the United States, it was the object of those in charge of the work to make not only a more accurate statistical estimate of the actual product of the precious metals than had hitherto been made, but also to obtain such technical data as to the various processes by which these metals are reduced from their ores as would serve to show the actual condition of the industry, the advances it has made as compared with former periods, and its relative perfection and imperfection as compared with similar industries in other countries.

METHODS EMPLOYED.—In considering, at the outset, the best practical method by which such an investigation could be carried on, it was found that no information could be drawn from the experience of former American studies, inasmuch as no such far-reaching and detailed examination of this industry had ever been attempted in this or any other country, at least as far as could be learned. It was well known, however, to all who took part in making the original plans that precious metal mining and its allied labors presented peculiar obstacles to carrying out such a work, far greater than obtain in other industrial branches, from the fact that it is carried on in regions remote and difficult of access; that its business methods are relatively unsystematic, and that it is often of such a nature as to render those engaged in it extremely unwilling to have their transactions known to the world.

It was evident beforehand that the ordinary system of obtaining statistical information by sending circulars or lists of questions to be answered to all persons in charge of mining operations throughout the country would be impracticable, first, because there were no certain means of obtaining their addresses, and, second, because it was probable that, either through ignorance or unwillingness, a large proportion of the questions would be either imperfectly answered or entirely neglected, and it would be impossible to have any check on the completeness or accuracy of the answers obtained.

The plan finally adopted, therefore, was that of sending to every mine or reduction works in the country men of technical training and familiarity with the subject, to gather the necessary information personally, and assure themselves by local observation of the accuracy of the information obtained.

To aid these examiners a series of questions, arranged in schedules for each branch of mining and reduction process, was prepared after long and careful consideration, which should cover as far as possible all points of inquiry and also furnish checks on the accuracy of data given, intending thus to supplement any shortcoming in technical knowledge on the part of the expert and to systematize the data which he might send so as to facilitate the work of the compiler.

To carry out such a plan to theoretically perfect completion four requisites were necessary: an amount of time and of money disproportionate to the value of the results to be hoped for, a sufficient number of men both theoretically and practically familiar with all branches of the industry to act as experts, and a uniform willingness and ability on the part of those applied to to furnish the desired information.

In point of fact, however, after the work had been some time under way it was found that both the time and the money which could be allotted to this branch were inadequate to carry it through with the perfection aimed at; that it was impossible to find the number of men required who were in every respect fitted for it by education and experience, and that among owners and superintendents of mines and reduction works, while with a very few unimportant exceptions the greatest willingness was shown to grant us all the information they possessed, it was often found that they were themselves unable to answer the questions we asked, either through want of system in keeping records or because they had never thought of the importance or bearing of certain facts.

REASONS FOR INCOMPLETENESS.—The reasons for incompleteness in the results may be thus enumerated:

1. From want of previous experience the agents in charge could not distribute equally the ground to be covered among the experts employed, since the number of mines to be investigated bore no necessary relation to geographical area. As a consequence, toward the end of the time devoted to the investigation some regions received less attention than their relative importance merited.

2. The relative ability of the experts employed was necessarily unknown to the agents in charge until the investigation had proceeded so far that it was too late to make any radical change.

3. It was a practical impossibility to secure uniformity of ability and methods among so large a corps of experts as was necessary for the work. The result was that one would give more attention to one class of facts, another to another class, and when totals were made up from the schedule returns it was found that these facts were more complete in one region than in another.

As regards the best method for conducting such an investigation, the experience gained in this study would seem to teach that, while that employed here would produce the most perfect results under very favorable conditions, these conditions might demand an impracticably large expenditure of time and money. They would require a larger corps of experts, who should be specialists and receive adequate salaries, and be employed for a long enough time to become thoroughly familiar with their work before the investigation was undertaken. This could be best accomplished by making the investigation a permanent one. The results to be obtained by simple untrained enumerators, or from circulars sent without means of checking the results obtained by technical men, will necessarily prove so unreliable in the mining industry as to be of little value. Should the intermittent or decennial method still prevail a compromise between the two could be advantageously made by having untrained men go over the country rapidly and collect a few main figures for the statistical tables, and a smaller corps of thoroughly trained specialists make investigation of a few typical mines or reduction works in the various branches of the industry.

Leaving out of consideration the especial difficulties met with in the census of 1880, due to the attempt made to collect technological data as well as purely statistical information concerning production, wages, etc., great obstacles were found in collecting even the statistics of bullion production alone, and much of the product had to be estimated. The following extracts from the report of the Tenth Census (1880) show the difficulties then experienced in collecting statistics of production. The same difficulties were encountered to some extent in the present census

of 1890, though, thanks to the work performed annually by the mint, the production returns are now much more willingly furnished than they were in 1880.

Three principal methods have been adopted by statisticians in studying the bullion production of the United States.

The first and most obvious plan has been to use as a basis the receipts of domestic bullion reported by the several mints and United States assay offices, ascertaining the probable total product by adding to the figures thus obtained the amount shipped abroad, as shown by the customhouse returns, and the probable amount consumed in the arts. The objections to this method are: The amount coined within a certain period does not necessarily correspond to the production for that period. In the same way the proportion of the domestic product exported may be largely affected by the stock of precious metals on hand at any given time. Both of these variations depend primarily upon fluctuations in the bullion market and international balance of trade. An average of a long series of years would give tolerably accurate results, but for any stated period the figures of coinage, export, and consumption in the arts are apt to be deceptive.

Assuming the source of the bullion deposited at the mints to be correctly stated, there are still serious and unavoidable defects in the customhouse statistics, notwithstanding the care taken to secure accuracy. No account is taken of bullion transported overland into Canada, nor are the export figures for doré bullion, base bullion, ores, and matte shipped abroad always to be depended upon. * * *

The best results which can be hoped for from the most careful application of the "consumption and export" method are close approximations extending over considerable periods, but not the exact product for any given year. The system also fails to segregate the yield according to the productive source; and while the geographical distribution by state and territorial lines may be shown, it is hardly possible to carry the analysis further and ascertain in this way the yield of single districts or even counties. * * *

The second or "transportation" method consists in estimating the product from the statistics of the express companies, freight lines, and banks which have the handling of the product from its original sources. This plan would give more satisfactory results if, in the first place, all the bullion, ores, etc., were transported from the producing points through these different channels alone, and if, in the second place, none of the product were reshipped from point to point and thus twice recorded. As a matter of fact, there is a considerable portion of the gold yield sent through the mails as registered matter, and a large proportion passes from the productive source into the market through private channels. * * * But the impossibility of assigning to other channels the due proportion of the outflow through them; the fact that no record is made of the value of the gold bullion and dust sent through the mails; that no reliable allowance can be made for the undervaluation of gold dust and unassayed bullion by consignors, amounting in many cases to from 5 to 10 per cent; that there is no satisfactory means of checking the reshipments which are twice or more times recorded, combine to create a large margin which can hardly be definitely accounted for in making the total estimates. * * *

The third system is one which, were it practicable to pursue it into complete details, would lead to results more satisfactory than could be obtained in any other way. This may be termed the direct method. It would consist, if properly carried out, in obtaining from each bullion producer a statement of the quota contributed. The aggregate of the details thus reached would represent the actual total product of the country and would, moreover, segregate it according to districts. * * *

The chief obstacles encountered in the collection of bullion statistics directly from the producers were:

First. The wide extent of the field to be covered and the vast number of mines to be reported upon. Even were the mines located in easily accessible places, the wide range of territory over which they are scattered would render the labor of personally visiting each productive district a tedious matter; but when it is considered that they are for the most part to be found in rugged, mountainous tracts, often at high altitudes, and, when destitute of railroad communication, to be reached only by stage or on horseback, some idea may be gathered of the amount of work involved.

Second. The fact that a considerable yield is derived from small mines, the product from each of which, however insignificant in itself, goes to form part of an important aggregate, and should not be neglected.

Third. The reluctance of some mine owners and superintendents to give a full account of their operations, notwithstanding the strictly confidential manner in which these individual statements have been treated. * * *

Fourth. The fact that in a large majority of cases no systematic accounts are kept by mine owners, who were often unable to state from memory the precise output of their properties for a period which had elapsed some time before the inquiry was made.

Fifth. Many mines having changed hands during the census year, it was frequently impossible to obtain from the present holders a statement of the operations conducted prior to the change in ownership, or to communicate with the former owners if they had removed. * * *

With means still less adequate than were lately at command, the census authorities in 1870 found it impossible to trace the bullion product of the country at that time. The best results reached by the deputy marshals in certain instances hardly amounted to a moiety of the actual product as known through other sources of information. In the case of the census of 1880, even with greatly increased facilities, there were many gaps in the testimony which had to be filled out by estimates derived from other data than those collected directly by the experts. * * *

In compiling the material at hand the following system was adopted: The returns given in the individual mine schedules were first abstracted and grouped into aggregates for districts. Information as to the operations of the different establishments being in many cases confidential, publication of the results begins with the district exhibits. These, again, are condensed into tables for counties, and finally into abstracts for whole states and territories. Where a marked discrepancy existed between the schedule returns and other reliable data, the necessary additions were entered and the fact that they were estimates indicated. It is hardly necessary to remark that the schedules would show deficiencies rather than an excess as compared with correlative data. At the same time the schedules of reduction works were examined, and furnished a valuable check upon the figures derived from the mine reports. * * *

The collection of statistics of the precious metals in Colorado presents certain peculiar difficulties: First, from the fact that there are so many small mines which keep no accurate record of their production; second, because a very large proportion of its ores, being essentially heterogeneous in composition, have to be smelted, and are thus more difficult to trace than milling ores. The smelting ores are sold, it is true, mostly to smelters within the state, but the same mine often sells to different and widely separated works, and the smelters themselves buy ores in small lots from many mines, of which no separate record is kept. Moreover, the check furnished in the more western states over the total production by the express returns is here wanting, since, practically, the whole silver product is shipped east in lead bullion, of which the transportation companies keep no record. Nevertheless, owing to the almost uniform willingness which the more important mine owners, samplers, and smelters have shown to afford the data which they possessed, it is believed that the totals attained represent a very close approximation to the actual product of the state, and that the figures given are, on an average, within 5 per cent of the true amount, although in districts as yet incompletely developed this percentage may be greater.

As it was found impossible to separate with any degree of approximation the amount of "bullion produced", which should be credited to individual districts in several counties, the division into districts has been abandoned in such instances. In the following tables the

amount and value of ore raised has been given to districts as far as was possible, the heading "scattered" including, in general, mines from which no direct information was obtained, but which had sold ore to samplers or smelters. The sign of "estimated" (*) might be appended in many cases to amounts of bullion produced by counties, because these amounts were largely obtained by segregating returns of ore purchased by smelters and apportioning to each county the corresponding proportion of bullion produced from that ore; thus, while the relative amounts may be considered estimates, the total footings of the columns are compiled from comparatively accurate data. * * *

MONTANA.—It was evident that the figures of gold production deduced from the schedules were below the truth, since the mint returns report the gold production of Montana as a little over a million dollars in excess. As the mint figures are certainly below the truth, it was proper that this difference should be added, the only question being to what branch of mining it should be credited. Now, the census returns from placer and hydraulic mines were notoriously incomplete, since, owing to the lateness of the season, but few of their owners could be found; but it is well known that they form the most important element in the gold production of Montana. On the other hand, it was thought that returns had been obtained from practically all the mills and smelting works. Under these circumstances it was judged best to discard the census figures for hydraulic and placer mines altogether, and assume as their production the difference between the amount of gold produced, as determined by mill and smelters returns, and the total product obtained from mint returns. * * *

The difficulties of obtaining reliable statistics of gold and silver productions were somewhat increased at the Eleventh Census by the stricter limitation of time and money to be devoted to this branch of the census, but all have been largely overcome by adopting the method successfully used in collecting annual statistics of other minerals, which consists in sending circulars containing a list of questions to be answered to all persons in charge of the mining operations throughout the country, and later to supplement this work by the employment of subagents, who should personally verify the schedules and obtain statistics of those mines which had not made returns by mail. No complete list of all the gold and silver mines in the United States existed. Very imperfect lists of those in a few states were given in the reports of the director of the mint and of various state officials, but by using these and other sources of information as a starting point it was found possible to compile fairly accurate and complete lists of all mines of any importance.

The likelihood of the schedule questions relating to works and mines being unanswered or answered incorrectly would evidently be greatly reduced by making the number of these questions as few as possible, and making them so simple that there would be no difficulty in understanding them.

The plan adopted for obtaining a directory of the mines was as follows: A circular was sent to every postmaster, assessor, county clerk, and newspaper editor in each mining district, and to the superintendents of mines whose post-office addresses could be ascertained, inclosing to each such person a blank on which he was requested to write and return the names and post-office addresses of all mines in his immediate vicinity. By this means many thousand names of mines were obtained. A second circular was then sent to the superintendent of each of these mines, including blanks worded as follows:

Name of mine, ———; location, town or district, ———; kind of metal produced—gold, silver, copper, lead, etc., ———; name of resident superintendent, ———; post-office address of superintendent, ———; name of company or owner, ———; address of principal office of company or owner, ———; operated or not in 1889, ———.

A directory blank was also sent to each mine superintendent, requesting him to fill in the names and addresses of neighboring mines. With the returns received from this second series of circulars the provisional list of mines was corrected and enlarged, and by following up this system a fairly accurate and complete list of addresses and names was obtained. To the managers of these mines were mailed the schedules with questions relating to the production of each mine and reduction works. The form of the schedule is shown in the appendix.

Had unlimited time been allowed, unquestionably nearly all the important mines could have been reached and returns obtained from them in this simple and inexpensive manner, but there would always remain a certain number of mines unreported which would necessitate the personal visit of an agent to get the desired information. This was foreseen, and without waiting to reach the limit obtainable by correspondence special agents were appointed from each mining state and territory, to whom were furnished lists of the mines which had made returns, as well as those which had not. These agents were instructed to visit the mines which had not reported and such as were not on the lists and have the schedules filled out and returned at the earliest possible date. In Colorado and California special subagents were appointed for each mining county, or in some cases for a group of counties. In some states one, two, or more subagents were appointed to collect the schedules, and after seeing that they were properly filled out to return them to the office in New York, where all the compiling and tabulating were done.

This dual method of collecting by mail and by personal visits has proved satisfactory. The number of schedules received by mail was 2,584; the number received through agents after personal visits was 3,420; total, 6,004. In other words, 43 per cent of all the mines and about 60 per cent of the total production and other statistics of gold and silver were obtained by correspondence.

As fast as the schedules were received at the office in New York they were examined and tabulated, first by post offices and districts, and then these were grouped into counties and states. The county and state totals only are given in this report.

STATISTICS OF PRODUCTION OF PRECIOUS METALS IN THE UNITED STATES PRIOR TO 1880.

In collecting the statistics of precious metal production for the Eleventh Census, it has been considered essential to make a careful study of existing statistics of production for previous years for the purpose of determining the degree of credit to which those statistics are entitled, as well as to justify the acceptance of the figures which have been collected for this report. It has also been considered important that this report should furnish, with such comment as seemed needed to render available to other students, all the statistical information obtainable concerning the precious metal industry. With this object in view, the statistical statements published in the various mint and other government reports, and collected from other sources considered reliable, are given.

PRODUCTION OF GOLD AND SILVER IN THE UNITED STATES FROM 1792.

[The estimate for 1792-1873 is by Dr. R. W. Raymond, United States mining commissioner, and since by the director of the mint.]

| YEARS. | Total. | Gold. | Silver. | YEARS. | Total. | Gold. | Silver. |
|----------------------------------|-----------------|-----------------|---------------|--------------------|--------------|--------------|--------------|
| Total | \$2,766,152,789 | \$1,838,861,760 | \$927,291,000 | 1866..... | \$63,500,000 | \$53,500,000 | \$10,000,000 |
| April 2, 1792—July 31, 1834..... | 14,000,000 | 14,000,000 | (a) | 1867..... | 65,225,000 | 51,725,000 | 13,500,000 |
| July 31, 1834—Dec. 31, 1844..... | 7,750,000 | 7,500,000 | 250,000 | 1868..... | 60,000,000 | 48,000,000 | 12,000,000 |
| 1845..... | 1,058,327 | 1,008,327 | 50,000 | 1869..... | 61,500,000 | 49,500,000 | 12,000,000 |
| 1846..... | 1,180,357 | 1,130,357 | 50,000 | 1870..... | 60,000,000 | 50,000,000 | 10,000,000 |
| 1847..... | 930,085 | 880,085 | 50,000 | 1871..... | 60,500,000 | 43,500,000 | 17,000,000 |
| 1848..... | 10,050,000 | 10,000,000 | 50,000 | 1872..... | 64,750,000 | 30,000,000 | 34,750,000 |
| 1849..... | 40,050,000 | 40,000,000 | 50,000 | 1873..... | 71,750,000 | 36,000,000 | 35,750,000 |
| 1850..... | 50,050,000 | 50,000,000 | 50,000 | 1874..... | 70,800,000 | 33,500,000 | 37,300,000 |
| 1851..... | 55,050,000 | 55,000,000 | 50,000 | 1875..... | 65,100,000 | 33,400,000 | 31,700,000 |
| 1852..... | 60,050,000 | 60,000,000 | 50,000 | 1876..... | 78,700,000 | 38,000,000 | 40,700,000 |
| 1853..... | 65,050,000 | 65,000,000 | 50,000 | 1877..... | 80,700,000 | 46,000,000 | 34,700,000 |
| 1854..... | 62,050,000 | 60,000,000 | 50,000 | 1878..... | 96,400,000 | 51,200,000 | 45,200,000 |
| 1855..... | 55,050,000 | 55,000,000 | 50,000 | 1879..... | 79,700,000 | 38,000,000 | 41,700,000 |
| 1856..... | 55,050,000 | 55,000,000 | 50,000 | 1880..... | 75,200,000 | 36,000,000 | 39,200,000 |
| 1857..... | 55,050,000 | 55,000,000 | 50,000 | 1881..... | 77,700,000 | 34,700,000 | 43,000,000 |
| 1858..... | 50,500,000 | 50,000,000 | 500,000 | 1882..... | 70,300,000 | 32,500,000 | 37,800,000 |
| 1859..... | 50,100,000 | 50,000,000 | 100,000 | 1883..... | 70,200,000 | 30,000,000 | 40,200,000 |
| 1860..... | 46,150,000 | 40,000,000 | 150,000 | 1884..... | 70,600,000 | 30,800,000 | 39,800,000 |
| 1861..... | 45,000,000 | 43,000,000 | 2,000,000 | 1885..... | 83,400,000 | 31,800,000 | 51,600,000 |
| 1862..... | 43,700,000 | 39,200,000 | 4,500,000 | 1886..... | 86,000,000 | 35,000,000 | 51,000,000 |
| 1863..... | 48,500,000 | 40,000,000 | 8,500,000 | 1887..... | 86,350,000 | 33,000,000 | 53,350,000 |
| 1864..... | 57,160,000 | 46,100,000 | 11,000,000 | 1888..... | 92,370,000 | 33,175,000 | 59,195,000 |
| 1865..... | 64,475,000 | 53,225,000 | 11,250,000 | 1889 { mint..... | 97,440,000 | 32,800,000 | 64,640,000 |
| | | | | 1890 { census..... | 90,283,793 | 32,886,744 | 57,397,049 |

a Insignificant.

The above figures, especially for the years prior to 1879, vary considerably in many cases from those published in earlier reports, the latter being made up from estimates made at the time and based upon returns which were often greatly exaggerated. Thus in the above table the total bullion production of 1866 is given as \$63,500,000, while the original report published in 1867 gave it at \$106,000,000.

The following table shows the earliest attempts in official reports to distribute the bullion product among the states and territories. Some of these totals have been greatly reduced in subsequent reports of the director of the mint, as is shown in the latest mint estimates, given herewith.

PRODUCTION OF GOLD AND SILVER IN THE UNITED STATES FROM 1866 TO 1876, INCLUSIVE.

| STATES AND TERRITORIES. | 1866. | 1867. | 1868. | 1869. | 1870. | 1871. | 1872. | 1873. | 1874. | 1875. | 1876. |
|---------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total | \$100,000,000 | \$75,000,000 | \$67,000,000 | \$61,500,000 | \$60,000,000 | \$60,663,000 | \$63,943,857 | \$71,612,523 | \$72,428,200 | \$74,817,500 | \$85,250,000 |
| Arizona..... | | 500,000 | 500,000 | 1,000,000 | 800,000 | 800,000 | 625,000 | 500,000 | 487,000 | 750,000 | |
| California..... | 25,000,000 | 25,000,000 | 22,000,000 | 22,500,000 | 25,000,000 | 20,000,000 | 19,040,000 | 18,025,722 | 20,300,531 | 17,753,151 | |
| Colorado..... | 17,000,000 | 3,500,000 | 3,250,000 | 4,000,000 | 3,675,000 | 4,000,000 | 4,001,405 | 4,020,203 | 5,188,510 | 5,392,810 | |
| Idaho..... | 17,000,000 | 6,500,000 | 7,000,000 | 7,000,000 | 6,000,000 | 5,000,000 | 2,005,870 | 2,500,000 | 1,880,004 | 1,750,000 | |
| Montana..... | 18,000,000 | 12,000,000 | 15,000,000 | 9,000,000 | 9,100,000 | 8,050,000 | 5,178,047 | 3,844,722 | 3,573,000 | | |
| Nevada..... | 10,000,000 | 20,000,000 | 14,000,000 | 14,000,000 | 10,000,000 | 22,500,000 | 25,548,801 | 35,254,507 | 35,452,233 | 40,478,309 | |
| New Mexico..... | | 500,000 | 250,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 325,000 | |
| Oregon and Wash- ington..... | 8,000,000 | 3,000,000 | 4,000,000 | 8,000,000 | 3,000,000 | 2,500,000 | 2,000,000 | 1,585,784 | 763,005 | 1,240,078 | |
| Utah..... | | | | | 1,300,000 | 2,300,000 | 2,445,284 | 3,778,200 | 3,911,001 | 3,137,088 | |
| Wyoming..... | | | | | 100,000 | 100,000 | 100,000 | 50,000 | | | |
| Other sources..... | 5,000,000 | 5,000,000 | 1,000,000 | 500,000 | 525,000 | 250,000 | 250,000 | 250,000 | 100,000 | 500,000 | |
| Latest mint esti- mate..... | 63,500,000 | 65,225,000 | 60,000,000 | 61,500,000 | 60,000,000 | 60,500,000 | 64,750,000 | 71,750,000 | 70,800,000 | 65,100,000 | 78,700,000 |
| Gold..... | 53,500,000 | 51,725,000 | 48,000,000 | 49,500,000 | 50,000,000 | 43,500,000 | 36,000,000 | 36,000,000 | 33,500,000 | 33,400,000 | 39,000,000 |
| Silver..... | 10,000,000 | 13,500,000 | 12,000,000 | 12,000,000 | 10,000,000 | 20,000,000 | 28,750,000 | 35,750,000 | 37,300,000 | 31,700,000 | 46,250,000 |

GOLD AND SILVER.

41

APPROXIMATE DISTRIBUTION OF THE GOLD PRODUCT, BY STATES AND TERRITORIES, ESTIMATED BY THE DIRECTOR OF THE MINT.

| STATES AND TERRITORIES. | 1877. | 1878. | 1879. | 1880. | 1881. | 1882. | 1883. |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total | \$45,100,000 | \$47,226,107 | \$38,900,000 | \$36,000,000 | \$34,700,000 | \$32,500,000 | \$30,000,000 |
| Alabama..... | | | | | | | |
| Alaska..... | | | | 6,000 | 15,000 | 150,000 | 300,000 |
| Arizona..... | 300,000 | 500,000 | 800,000 | 400,000 | 1,000,000 | 1,000,000 | 950,000 |
| California..... | 15,000,000 | 15,260,679 | 17,600,000 | 17,500,000 | 18,200,000 | 16,800,000 | 14,120,000 |
| Colorado..... | 3,000,000 | 3,366,404 | 3,225,000 | 3,200,000 | 3,300,000 | 3,300,000 | 4,100,000 |
| Dakota..... | 2,000,000 | 3,000,000 | 2,420,000 | 3,600,000 | 4,000,000 | 3,300,000 | 3,200,000 |
| Georgia..... | 100,000 | 100,000 | 90,000 | 120,000 | 125,000 | 250,000 | 100,000 |
| Idaho..... | 1,500,000 | 1,150,000 | 1,200,000 | 1,980,000 | 1,700,000 | 1,500,000 | 1,400,000 |
| Michigan..... | | | | | | | |
| Montana..... | 3,200,000 | 2,260,511 | 2,500,000 | 2,400,000 | 2,330,000 | 2,550,000 | 1,800,000 |
| Nevada..... | 18,000,000 | 19,546,513 | 9,000,000 | 4,800,000 | 2,250,000 | 2,000,000 | 2,520,000 |
| New Mexico..... | 175,000 | 175,000 | 125,000 | 130,000 | 185,000 | 150,000 | 220,000 |
| North Carolina..... | 100,000 | 150,000 | 90,000 | 95,000 | 115,000 | 190,000 | 167,000 |
| Oregon..... | 1,000,000 | 1,000,000 | 1,150,000 | 1,090,000 | 1,160,000 | 830,000 | 660,000 |
| South Carolina..... | | | | 15,000 | 35,000 | 25,000 | 50,500 |
| Tennessee..... | | | | | 5,000 | | |
| Texas..... | | | | | | | |
| Utah..... | 350,000 | 392,000 | 575,000 | 210,000 | 145,000 | 190,000 | 140,000 |
| Virginia..... | 50,000 | | | 10,000 | 10,000 | 15,000 | 5,000 |
| Washington..... | 300,000 | 300,000 | 75,000 | 410,000 | 120,000 | 120,000 | 80,000 |
| Wyoming..... | | | | 20,000 | 5,000 | 5,000 | 4,000 |
| Other sources, not distributed (a)..... | 25,000 | 25,000 | 50,000 | 14,000 | | | 17,500 |
| Latest mint estimate | 46,800,000 | 51,200,000 | 38,900,000 | 36,000,000 | 34,700,000 | 32,500,000 | 30,000,000 |

| STATES AND TERRITORIES. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | | | | | Mint. | Census. |
| Total | \$30,800,000 | \$31,801,000 | \$34,869,000 | \$33,135,000 | \$33,167,500 | \$32,967,000 | \$32,880,744 |
| Alabama..... | | | | | | | 2,330 |
| Alaska..... | 200,000 | 300,000 | 446,000 | 675,000 | 850,000 | 900,000 | 904,650 |
| Arizona..... | 930,000 | 880,000 | 1,110,000 | 830,000 | 871,500 | 900,000 | 910,174 |
| California..... | 13,600,000 | 12,700,000 | 14,725,000 | 13,400,000 | 12,750,000 | 13,000,000 | 12,586,722 |
| Colorado..... | 4,250,000 | 4,200,000 | 4,450,000 | 4,000,000 | 3,758,000 | 3,500,000 | 3,883,859 |
| Dakota..... | 3,300,000 | 3,200,000 | 2,700,000 | 2,400,000 | 2,600,000 | 2,900,000 | 3,091,137 |
| Georgia..... | 137,000 | 136,000 | 152,500 | 110,000 | 104,000 | 107,000 | 107,605 |
| Idaho..... | 1,250,000 | 1,800,000 | 1,800,000 | 1,900,000 | 2,400,000 | 2,000,000 | 1,964,159 |
| Michigan..... | | | | 26,000 | 42,000 | 70,000 | 87,040 |
| Montana..... | 2,170,000 | 3,300,000 | 4,425,000 | 5,230,000 | 4,200,000 | 3,500,000 | 3,139,327 |
| Nevada..... | 3,500,000 | 3,100,000 | 3,080,000 | 2,500,000 | 3,525,000 | 3,000,000 | 3,500,295 |
| New Mexico..... | 300,000 | 800,000 | 400,000 | 500,000 | 602,000 | 1,000,000 | 815,655 |
| North Carolina..... | 157,000 | 152,000 | 175,000 | 225,000 | 136,000 | 145,000 | 144,795 |
| Oregon..... | 660,000 | 800,000 | 980,000 | 900,000 | 825,000 | 1,200,000 | 964,309 |
| South Carolina..... | 57,000 | 43,000 | 37,500 | 50,000 | 39,000 | 45,000 | 46,853 |
| Tennessee..... | | | | | | | |
| Texas..... | | | | | | | 6,828 |
| Utah..... | 120,000 | 180,000 | 216,000 | 220,000 | 290,000 | 500,000 | 487,666 |
| Virginia..... | 2,000 | | | | | | 4,160 |
| Washington..... | 85,000 | 120,000 | 147,000 | 150,000 | 145,000 | 175,000 | 186,150 |
| Wyoming..... | 0,000 | | | | | | 14,512 |
| Other sources, not distributed (a)..... | 76,000 | 90,000 | 5,000 | 20,000 | 30,000 | 25,000 | 610,369 |
| Latest mint estimate | 30,800,000 | 31,800,000 | 35,000,000 | 33,000,000 | 33,175,000 | 32,800,000 | |

a In some years this is stated to include Alabama, Michigan, Tennessee, Texas, Vermont, Virginia, and Wyoming.

b Maryland.

APPROXIMATE DISTRIBUTION OF THE SILVER PRODUCT, BY STATES AND TERRITORIES, ESTIMATED BY THE DIRECTOR OF THE MINT.

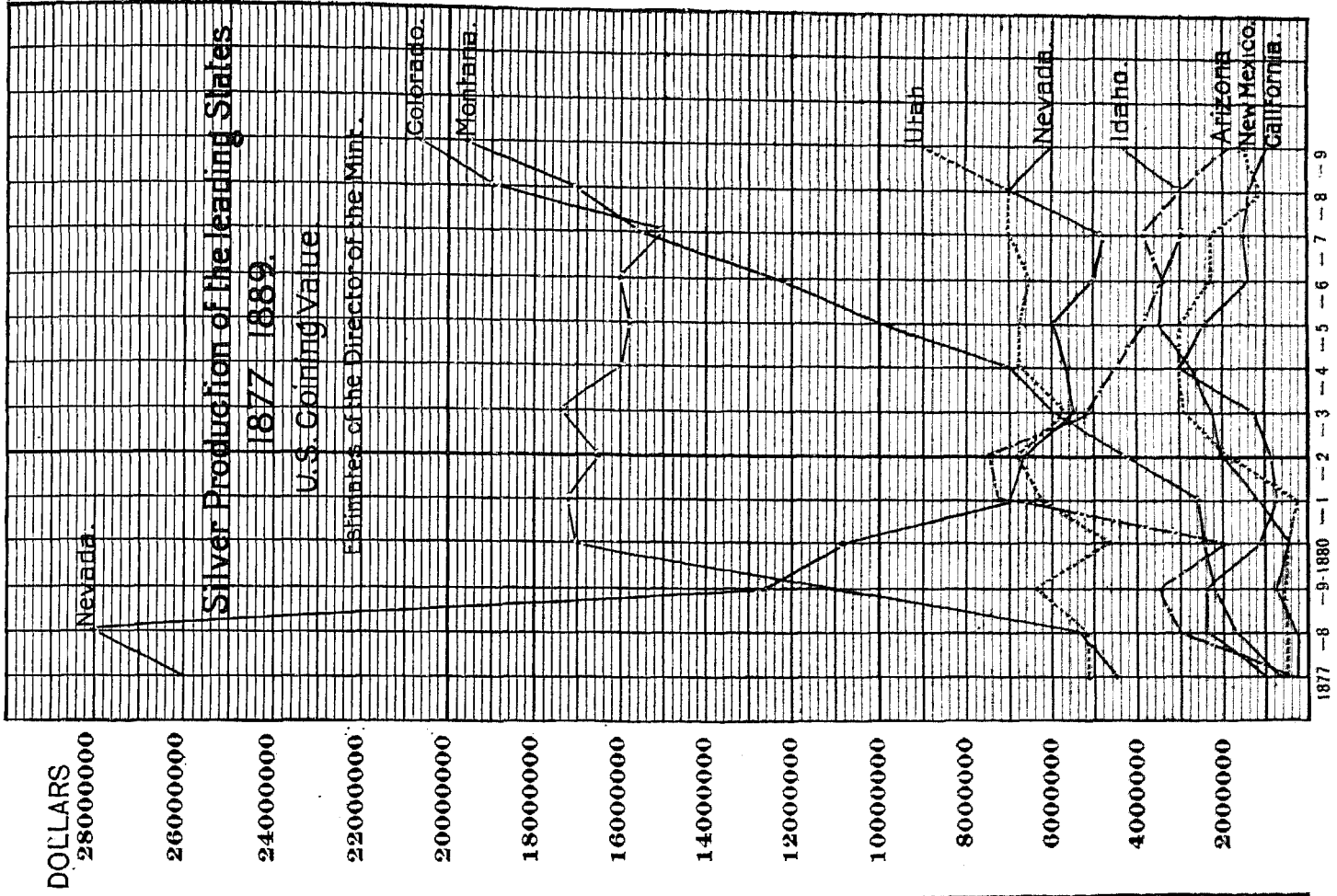
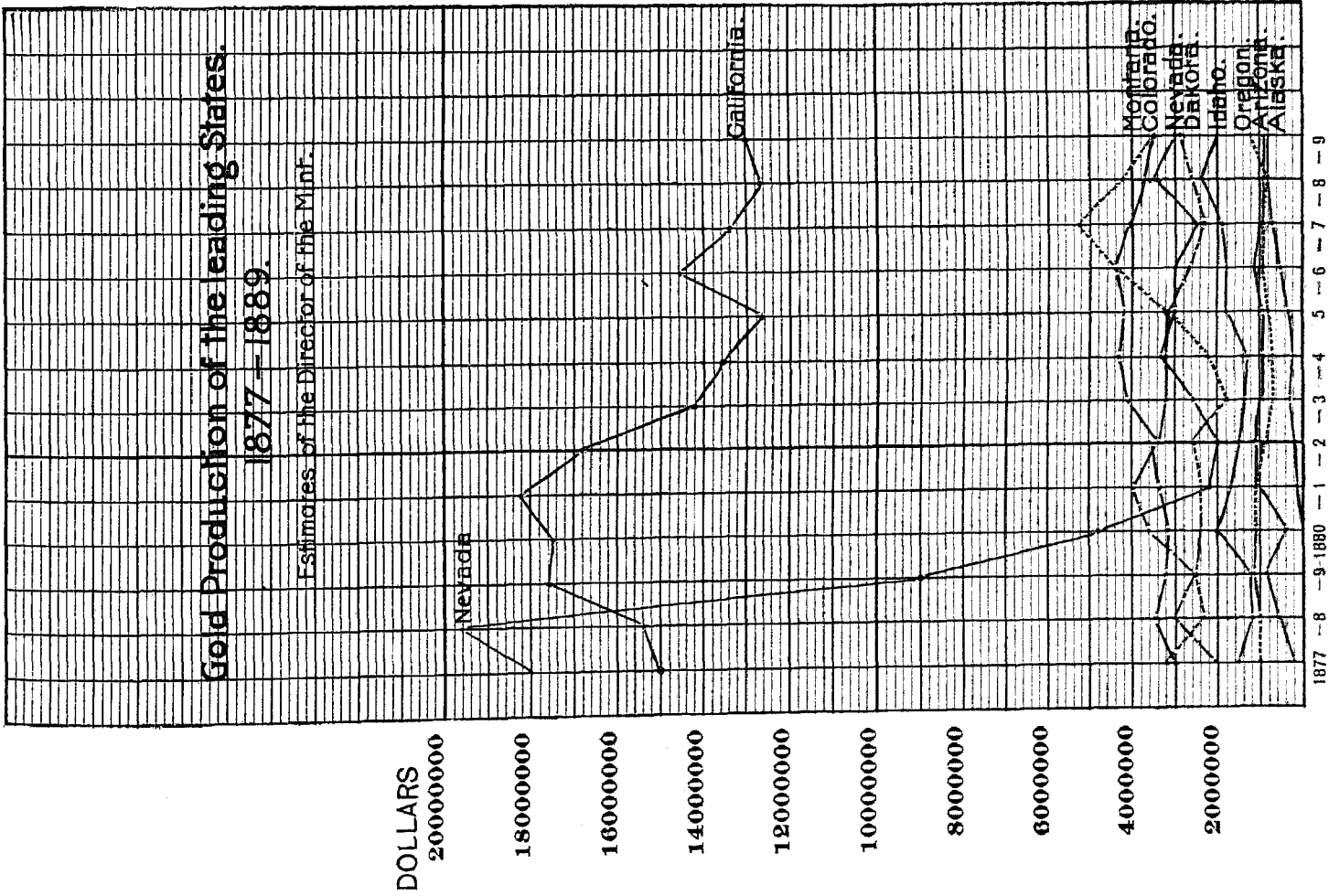
[United States coinage value.]

| STATES AND TERRITORIES. | 1877. | 1878. | 1879. | 1880. | 1881. | 1882. | 1883. |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total | \$38,950,000 | \$40,720,314 | \$40,812,000 | \$38,200,000 | \$43,000,000 | \$46,800,000 | \$46,200,000 |
| Alabama..... | | | | | | | |
| Alaska..... | | | | | | | |
| Arizona..... | 500,000 | 3,000,000 | 3,550,000 | 2,000,000 | 7,300,000 | 7,500,000 | 5,200,000 |
| California..... | 1,000,000 | 2,373,380 | 2,400,000 | 1,100,000 | 750,000 | 845,000 | 1,400,000 |
| Colorado..... | 4,500,000 | 5,304,940 | 11,700,000 | 17,000,000 | 17,100,000 | 10,500,000 | 17,370,000 |
| Dakota..... | | | 10,000 | 70,000 | 70,000 | 175,000 | 150,000 |
| Georgia..... | | | | | | | 1,000 |
| Idaho..... | 250,000 | 200,000 | 650,000 | 450,000 | 1,300,000 | 2,000,000 | 2,100,000 |
| Maine..... | | | | | 5,000 | | |
| Michigan..... | 200,000 | 100,000 | 780,000 | | | | |
| Montana..... | 750,000 | 1,000,000 | 2,225,000 | 2,500,000 | 2,000,000 | 4,370,000 | 0,000,000 |
| Nevada..... | 20,000,000 | 28,180,350 | 12,500,000 | 10,000,000 | 7,000,000 | 0,750,000 | 0,400,000 |
| New Mexico..... | 500,000 | 500,000 | 600,000 | 425,000 | 275,000 | 1,800,000 | 2,845,000 |
| North Carolina..... | | | | | | | 8,000 |
| Oregon..... | 100,000 | 100,000 | 20,000 | 15,000 | 50,000 | 35,000 | 20,000 |
| South Carolina..... | | | | | | | 500 |
| Texas..... | | | | | | | |
| Utah..... | 5,075,000 | 5,208,000 | 6,250,000 | 4,740,000 | 6,400,000 | 6,800,000 | 5,000,000 |
| Virginia..... | | | | | | | |
| Washington..... | 50,000 | 25,000 | 20,000 | | | | 500 |
| Other sources, not distributed (a)..... | 25,000 | 25,000 | 47,000 | | | | |
| Latest mint estimate | 38,800,000 | 45,200,000 | 40,800,000 | 38,200,000 | 43,000,000 | 46,800,000 | 46,200,000 |

| STATES AND TERRITORIES. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | | | | | Mint. | Census. |
| Total | \$48,800,000 | \$51,600,000 | \$51,321,500 | \$53,941,800 | \$50,200,700 | \$64,708,790 | \$66,306,938 |
| Alabama..... | | | | | | | 100 |
| Alaska..... | | 2,000 | 2,000 | 300 | 3,000 | 10,348 | 11,918 |
| Arizona..... | 4,500,000 | 3,800,000 | 3,400,000 | 3,800,000 | 3,000,000 | 1,993,303 | 2,343,977 |
| California..... | 3,000,000 | 2,500,000 | 1,400,000 | 1,500,000 | 1,400,000 | 1,034,348 | 1,878,807 |
| Colorado..... | 16,000,000 | 15,800,000 | 16,000,000 | 15,000,000 | 19,000,000 | 20,086,808 | 28,757,761 |
| Dakota..... | 150,000 | 100,000 | 425,000 | 540,000 | 100,000 | 64,646 | 105,381 |
| Georgia..... | | | 1,000 | 500 | 500 | 405 | 404 |
| Idaho..... | 2,720,000 | 3,500,000 | 3,600,000 | 3,000,000 | 3,000,000 | 4,895,959 | 4,056,488 |
| Maine..... | | | | | | | |
| Michigan..... | | | | 35,000 | 84,000 | 77,575 | 18,885 |
| Montana..... | 7,000,000 | 10,000,000 | 12,400,000 | 15,500,000 | 17,000,000 | 10,303,930 | 17,468,980 |
| Nevada..... | 5,000,000 | 6,000,000 | 5,000,000 | 4,900,000 | 7,000,000 | 6,200,000 | 6,072,241 |
| New Mexico..... | 3,300,000 | 3,000,000 | 2,300,000 | 2,300,000 | 1,200,000 | 1,461,010 | 1,017,578 |
| North Carolina..... | 3,530 | 3,000 | 3,000 | 5,000 | 3,500 | 3,878 | 3,879 |
| Oregon..... | 20,000 | 10,000 | 5,000 | 10,000 | 15,000 | 38,787 | 23,582 |
| South Carolina..... | 500 | | 500 | 500 | 200 | 232 | 232 |
| Texas..... | | | 200,000 | 250,000 | 300,000 | 300,000 | 418,173 |
| Utah..... | 6,800,000 | 6,750,000 | 6,500,000 | 7,000,000 | 7,000,000 | 9,050,505 | 9,057,014 |
| Virginia..... | | | | | | | 18 |
| Washington..... | 1,000 | 70,000 | 80,000 | 100,000 | 100,000 | 103,434 | 56,801 |
| Other sources, not distributed (a)..... | 5,000 | 5,000 | 5,000 | 500 | 500 | 1,203 | |
| Latest mint estimate | 48,800,000 | 51,600,000 | 51,000,000 | 53,350,000 | 50,195,000 | 64,646,000 | |

a In some years this is stated to include Alabama, Michigan, Tennessee, Texas, Vermont, Virginia, and Wyoming.

The figures for 1866 are taken from the "Report upon the mineral resources of the United States", by Special Commissioners J. Ross Browne and James W. Taylor, published in 1867. The figures for 1867 are from Commissioner J. Ross Browne's report, 1868, and those for 1868 are from the first report by Dr. R. W. Raymond on "Mineral resources of the states and territories west of the Rocky mountains", published in 1869. The figures for the years 1869 to 1875 are from Dr. Raymond's eighth and last report, published in 1876. They are given as estimates made from the best attainable authorities. In many cases he accepts the estimates of Wells, Fargo & Co. as the best attainable, but in other cases he rejects them in favor of figures obtained from other sources.



Commissioner Browne, in his report, refers to the statistics for 1866 and earlier years as follows:

Mr. Swain, superintendent of the branch mint at San Francisco, a gentleman possessing both the means and the disposition to inform himself on this subject, estimates both the products of gold and silver for Oregon, California, Nevada, and Washington territory as follows:

| | |
|------------|--------------|
| 1861 | \$43,391,000 |
| 1862 | 49,370,000 |
| 1863 | 52,500,000 |
| 1864 | 63,450,000 |
| 1865 | 70,900,000 |

Great differences of opinion, however, exist as to the accuracy of this estimate (1866). To some it appears exaggerated, while others pronounce it far below the actual yield. The imperfect returns received for the last 9 months would seem to warrant the conclusion that it is not an unreasonable estimate. For instance, the product of Oregon is assumed to be \$8,000,000. Statistical tables supposed to be worthy of credit show a probable yield for that state of \$20,000,000. In 1865 the generally accepted estimate for Oregon was \$19,000,000, though that was probably above the actual product.

In his report for 1867, Commissioner J. Ross Browne writes as follows concerning the statistics of that year:

It has been impossible to obtain an account of the shipments from each agency at the express office of Wells, Fargo & Co., at San Francisco. For reasons of private expediency they refrain from giving the desired information. We have, however, the aggregate receipts of their office, and, knowing very nearly what amount can be accredited to California, Nevada, and British Columbia, can draw reasonable conclusions as to the proportion derived from Idaho, Washington, and Oregon. * * *

The bullion product of Washington is estimated by the surveyor general at \$1,500,000; that of Oregon is rated as high as \$2,500,000. Intelligent residents of Idaho and Montana represent that the figures given in the above estimate, so far as these territories are concerned, are entirely too low, and might be doubled without exceeding the truth. The product of Idaho alone for this year is said to be from \$15,000,000 to \$18,000,000; that of Montana is estimated by the surveyor general at \$20,000,000. Similar exceptions are taken to the estimates of Colorado, New Mexico, and Arizona. As I have no grounds for accepting these statements beyond the assertion that most of the bullion is carried away in the pockets of the miners, I am inclined to rely upon the returns of the assessors, express companies, and official tables of export. Admitting that a fraction over 7 per cent may have escaped notice, although reasonable allowance is made for this in the estimate of \$70,000,000, and that a considerable sum may be derived from sources not enumerated, I feel confident the additional allowance of \$5,000,000 is sufficient to cover the entire bullion product of the United States for the year 1867, thus making the aggregate from all sources \$75,000,000, as stated in the report of the Secretary of the Treasury.

I have endeavored to obtain returns of the annual product of each state and territory since 1848; but, for the reasons already stated, and in the absence of reliable statistics, it has been impossible to make the necessary divisions with more than approximate accuracy.

Dr. Raymond's statistics ending in 1875, there was no attempt made to estimate the production of gold and silver in the United States in 1876, and the only figures given in any official report for that year are those found in the following extract from the report of the director of the mint for the fiscal year ended June 30, 1876:

From the most authentic sources of information which could be procured it has been estimated that the production of gold and silver for the fiscal year (1876) was about \$85,250,000, of which amount \$46,750,000 was gold and \$38,500,000 silver.

In the table printed in the report of the director of the mint for 1889 these figures are changed to \$39,900,000 gold and \$38,800,000 silver, a total of \$78,700,000.

In his report for the fiscal year ended June 30, 1887, page 14, the mint director estimates the product of the mines for the fiscal year at \$44,000,000 gold and \$38,000,000 silver, a total of \$82,000,000. For the calendar year 1877 the product is given in the same report, page 13, as \$45,100,000 gold and \$38,950,000 silver, distributed among the states and territories as shown in the accompanying table in the report. In this table the figures for 1877, 1878, and 1879 are from the annual reports of the director of the mint, and for the years 1880 to 1889, inclusive, they are from the "Annual reports of the director of the mint upon the statistics of production of the precious metals in the United States", the last named series of reports beginning in 1880.

The act making appropriations for the sundry civil expenses of the government for the year 1881 contained an appropriation of \$5,000 "for the collection of statistics relative to the annual production of the precious metals in the United States, to be expended under the direction of the Secretary of the Treasury". This work was assigned by the Secretary of the Treasury to the director of the mint, whose first report was for the calendar year 1880. Appropriations by acts of Congress for subsequent years have expressly provided that the collection of statistics of the production of the precious metals shall be under the direction of the director of the mint. The results of such collection have been published each year since 1880 in volumes entitled "Production of gold and silver in the United States".

The director of the mint, notwithstanding the very limited appropriation allowed for the purpose, has been able, by utilizing the exceptional facilities which his office affords, to obtain a closer approximation to the actual amount of gold and silver production in the United States than it would be possible to obtain by any method other than a complete census. In this work the director has availed himself of the records of the operations of the several mints and assay offices, of returns from private refineries, from the bankers and brokers dealing in gold and silver, and from express and other transportation companies. Special agents of the mint have also been employed in mining districts where no other facilities could be provided for collecting this class of statistics.

The following extracts from the report of the director of the mint for 1889 show his estimates for that calendar year, together with a statement of the general method he adopts in reaching the results:

PRODUCTION OF GOLD.—The product of gold from our own mines is susceptible of very accurate determination, for the reason that, with the exception of the small amount which enters directly into consumption as jewelry, the entire product finds its way very promptly to the institutions of the mint service, either in crude bullion directly from the mines and mills or in the shape of fine gold bars, the output of private refineries in the United States.

The mints of the United States offer complete facilities to the producers of gold to realize promptly the full value of their product. At the large acid refineries connected with them the base metals are eliminated and the precious metals are parted and refined at an expense to the producer of only the actual cost to the government of the operations. The coinage of gold is free—no charge to depositors—while the manufacture of fine bars bearing the attestation of the government as to weight and fineness is made at a trifling cost. The establishment of government assay offices in gold-producing sections of the country, at which the full mint value is paid depositors of gold bullion immediately upon the determination by chemical test of the quantity of the precious metals contained in their deposits (the government paying the cost of transportation to the mint at Philadelphia for coinage), naturally tends to attract to them the gold produced in those localities. * * *

From an examination of all the returns and data at the disposal of this bureau the product of gold from the mines of the United States during the calendar year 1889 is estimated to have been 1,587,000 fine ounces, of the value of \$32,800,000.

The following statement exhibits the data upon which the estimate of the gold product is based:

ESTIMATE OF THE GOLD PRODUCT OF THE UNITED STATES FOR 1889 BY THE DIRECTOR OF THE MINT.

| | FINE OUNCES. |
|---|--------------|
| Bullion of domestic production deposited at mints and assay offices..... | 1,540,019 |
| Bullion of domestic production (other than United States mint or assay office bars) exported from the United States.. | 54,012 |
| Bullion of domestic production reported by 26 private refineries in the United States as having been made into bars for manufacturers and jewelers..... | 50,000 |
| Total..... | 1,650,040 |
| Deduct foreign bullion reported by private refineries in the United States, as contained in their product of fine gold bars deposited at mints and assay offices and there classified as of domestic production | 63,811 |
| Domestic product for 1889 | 1,586,229 |

As confirmatory of the foregoing estimate of the gold product of the United States, the following tables for the same year, based upon the work of private and government refineries, is presented:

ESTIMATE OF THE GOLD PRODUCT OF THE MINES IN THE UNITED STATES FOR 1889.

| | FINE OUNCES. |
|---|--------------|
| Domestic product of fine gold bars reported by 5 private refineries in the United States, being all who manufacture fine gold bars..... | 847,865 |
| Unrefined gold of domestic production deposited at mints and assay offices..... | 689,658 |
| Gold of domestic production reported by private works in the United States as having been made into bars for manufacturers and jewelers | 50,009 |
| Domestic product..... | 1,587,532 |

The domestic product of gold as exhibited in the above estimate was 1,587,532 fine ounces, of the value of \$32,817,190.

As a mean between these two estimates, the product has been placed at 1,587,000 fine ounces, of the value of \$32,800,000.

Doubtless some slight product may have escaped the researches of this bureau. It is a well-known fact that many gold nuggets and curious specimens of native gold, as well as much gold quartz, mined in the United States are annually made into articles of jewelry and ornamentation. As the value of the product so used is not a matter of record, and, moreover, adds nothing to the supply for monetary purposes, no allowance, by way of estimate, has been made for it.

PRODUCTION OF SILVER.—The product of silver from the mines of the United States is not susceptible of as accurate determination as the product of gold. As the mints of the United States are not open to the free coinage of silver, as of gold, the product of our mines which finds its way to government institutions consists of Treasury purchases of silver for the mandatory coinage of the silver dollar, silver parted from deposits of gold, and silver deposited for manufacture into fine bars with government stamp as to weight and purity. Moreover, government refineries do not offer the same advantages to producers of silver as private works, for the reason that no allowance is made at the former for the value of the base metals contained in deposits, while at private works many of the base metals commonly associated with silver in nature, such as lead and copper, are paid for, and constitute a very important and valuable component. Indeed, it may be said that considerably more than one-half of all the silver produced is extracted from lead ores, while very many copper ores contain appreciable quantities of silver, which is extracted at a profit.

The difficulty, however, in ascertaining the exact product of silver from our own mines does not lie so much in the complex nature of silver ores as it does in the separation from our own product of the silver contained in foreign ores and base bullion reduced and refined in the United States.

Aside from silver bars shipped to the United States for refining, the great mass of the silver imported into this country is contained in silver-lead ores, valuable for fluxing purposes, carrying a large percentage of metallic lead and small quantities of silver to the ton. These foreign products, which began to come to the United States, principally from Mexico, in 1885, have, since the extension of railways into Mexico, largely increased in quantity. To ascertain the quantity of silver extracted from these products is exceedingly difficult, and the effort to do so has entailed considerable labor on this bureau and has taxed to the utmost the courtesy of managers and officers of private refineries in this country.

Another fruitful source of difficulty lies in the different values given to silver, occasioned largely by the fluctuations in the commercial price. As the value only, and not the quantity, of silver imported and exported is registered at the customhouses, the quantity actually brought into and taken out of the country must be somewhat uncertain. Any estimate of the product of silver from our own mines, as distinguished from the product of our smelting and refining works, is at the best but a close approximation.

All the reports and data in the possession of this bureau indicate that the product of silver from our mines for the calendar year 1889 was approximately 50,000,000 fine ounces, of the commercial value, at the average price of silver during the calendar year (\$0.935 per ounce fine), of \$46,750,000, and of the coining value in silver dollars of \$64,646,464.

The following statement presents the data upon which the estimate of the silver product of the country is based:

ESTIMATE OF THE SILVER PRODUCT OF THE UNITED STATES IN 1889 BY THE DIRECTOR OF THE MINT.

| | FINE OUNCES. |
|---|--------------|
| Bullion deposited at mints and assay offices, classified as of domestic production..... | 30,100,325 |
| Bullion (other than United States mint or assay office bars), classified as of domestic production, exported from the United States (customhouse rating at commercial value \$26,301,754, corresponding, at average price of silver during the year, \$0.095 per fine ounce)..... | 28,130,000 |
| Contained in copper matte and ore exported from the United States, silver contents not registered (approximate).... | 629,000 |
| Bullion of domestic production reported by private refineries in the United States as having been made into bars for industrial use | 2,918,929 |
| Total | 61,787,254 |
| Deduct: | |
| Foreign silver bullion imported into the United States (approximate)..... | 5,833,000 |
| Silver in ores imported into the United States (approximate) | 7,000,000 |
| Total imported | 12,833,000 |
| Less foreign silver bullion deposited at mints and assay offices..... | 926,558 |
| Foreign silver included in fine bars manufactured by private refineries in the United States and classified at the mints and customhouse as domestic (approximate) | 11,906,442 |
| Estimated silver product for 1889 | 49,880,812 |

As confirmatory of the above estimate of the silver yield of our mines, the following table, exhibiting the product of private and government refineries, together with the silver exported in furnace products, is here presented:

ESTIMATE OF THE SILVER PRODUCT OF THE UNITED STATES IN 1889

| | FINE OUNCES. |
|---|--------------|
| Domestic product of fine silver bars reported by 10 private refineries of the United States, being all who manufacture fine silver bars | 47,894,963 |
| Unrefined silver of domestic production deposited at mints and assay offices..... | 2,924,700 |
| Silver exported in copper matte and ore..... | 629,000 |
| Estimated silver product for 1889 | 50,518,663 |

As the separation of the product of our own mines from that of foreign ores made by private refineries is not exact, something of a mean between these two estimates has been adopted as approximately representing the silver product of the United States during the calendar year, viz, 50,000,000 fine ounces.

The smelting and refining companies which made confidential returns to the director of the mint for 1889 courteously furnished these same returns to the Census Office. A tabulation from these of the production of fine gold and silver bars gives the same total figures as those given by the director of the mint.

This method is probably correct as regards the gold production, since, as stated by the director of the mint, practically all the gold finds its way to the mints and United States assay offices, and, as shown in the tables previously quoted, two independent methods of computing the total gold production give results which practically agree, differing only by 1,303 ounces. In the case of silver, however, not only the difficulties described by the director of the mint, but the fact that the two estimates made by independent methods give materially different results, indicate the possibility of both methods being quite inaccurate.

A tabulation of the returns of silver production by the refineries which produce both fine and base bullion, after all deductions have been made for the production from foreign ores, and for duplication by one establishment refining the base bullion of another (data for these deductions having been given by all the works), gives a total silver product of 50,996,055 fine ounces of silver bullion, to which should be added 629,000 ounces, reported to the director of the mint as exported in copper matte, making a total of 51,625,055 ounces, or over 1,000,000 ounces greater than the larger of the estimates given in the two tables of the director of the mint previously quoted. No greater weight, however, can be given to this figure than to the estimate of the director of the mint, for it is quite possible that it contains some duplications for which deductions were not made, and, on the other hand, the census investigation has found a number of errors of omission in these statistics, such, for example, as the item of silver exported in copper matte, given by the mint report at 629,000 ounces, while the unquestionably correct returns made to the census show that no less than 1,418,000 ounces of silver were exported in copper matte in 1889.

Another independent estimate is the sum reported to the director of the mint by the mint officers and agents for individual states and territories. This sum is, for gold 1,689,166 ounces, and for silver 56,452,925 ounces. The director of the mint, however, properly gives very little credit to these estimates by agents in the different states on account of the tendency to exaggeration on the part of producers who make returns to the mint agents.

The last independent estimate of the gold and silver production is that made by Mr. Valentine, vice president and general manager of the Wells-Fargo Express Company, based upon the returns of express agents and transportation companies. Converting his figures into ounces, they are as follows: gold, 1,573,526 fine ounces; silver, 68,945,359 fine ounces. This does not include the product of the states of the Appalachian range, nor of Michigan, which the director of the mint estimates at 18,962 ounces of gold and 64,540 ounces of silver.

The annual estimates of Mr. Valentine are widely published and quoted by statisticians, as, for example, by Sir Hector Hay in the tables furnished by him to the royal commission of Great Britain on recent changes in the relative value of the precious metals. In the report of that commission (first part, page 13) he says:

I think he (Mr. Valentine) is likely to be more correct than the mint figures for this reason: that when the mint authorities send round to the different mines to ascertain how much they have produced it is to the interest of those mining companies to exaggerate their production a little, whereas when they send their bullion by Messrs. Wells, Fargo & Co. all the different mines would declare the actual values. The mining companies would not wish to pay freight on more than the actual value, and, on the other hand, they would not like to declare a less sum, because they are insured in the same way.

Sir Hector Hay's reason for preferring Mr. Valentine's estimates to those of the director of the mint disappear, however, when the former gives the larger figures, as he does for 1889.

In the report on production of precious metals for the year 1886 the director of the mint refers to Mr. Valentine's figures as follows:

It is interesting to compare the production as here shown with the estimate of Mr. John J. Valentine, of Wells, Fargo & Co. This statistical contribution is based on the carrying trade of the country, their own and that of other express companies, railways, and other conveyances.

It will be readily understood that estimates like Mr. Valentine's are for many reasons necessarily imperfect. Certain express companies are no longer carriers, as formerly, of the entire shipments of gold and silver. A large portion of the deposits at the mints and assay offices of the United States, especially the western institutions, is brought thither by hand or private conveyance, or else delivered by express companies having no relations with the Wells-Fargo company, and often in such form that the value can not be ascertained.

Besides, as more fully stated in my last report of this series, the classification as between gold and silver products in Mr. Valentine's statement is necessarily imperfect, from the fact that a large portion of the silver bullion by express carries gold, and a large portion of the gold dust and bullion by express carries silver. Any division, therefore, as to the amount of gold and silver actually contained in bullion carried by express and other conveyances must be more or less arbitrary. The value of each can be known only after the deposit has reached a mint, a United States assay office, or a private refinery, and been assayed.

The classification as between gold and silver is, in Mr. Valentine's statement, imperfect, not from any fault on the part of the compiler, but as necessarily follows from the character of his returns, as admitted by Mr. Valentine. Under date of the 15th of December, 1886, in a letter to this bureau, this gentleman frankly says:

Without going into details, I may say that the government report now more nearly approximates the actual output than ours does by reason of the necessarily hurried conclusion of our statement at the close of the year. When we began these statements Wells, Fargo & Co. furnished the only information obtainable.

And in a subsequent letter, dated January 20, Mr. Valentine remarks:

As stated in a previous letter, I deem your fiscal reports for the United States of America more nearly correct than ours, you having more time and better opportunities to sift local reports than we now enjoy.

The above extract is conclusive as to the weight of probability which should be attached to Mr. Valentine's estimates.

The several estimates thus made by independent authorities are summarized as follows:

ESTIMATES OF PRODUCTION OF GOLD AND SILVER IN THE UNITED STATES IN 1889.

[Fine ounces.]

| AUTHORITIES. | Gold. | Silver. |
|--|-----------|------------|
| Mr. John J. Valentine's estimate | 1,573,526 | 68,945,359 |
| Estimate by officers and agents of mint | 1,689,166 | 56,452,025 |
| Estimate by the director of the mint | 1,587,000 | 50,000,000 |
| Returns from smelting and refining works | | 51,625,055 |
| Report of the Eleventh Census | 1,590,569 | 51,354,851 |

DISTRIBUTION OF THE PRODUCT AMONG THE STATES.

In each annual report of the director of the mint an attempt is made to distribute the estimated total production of gold and silver in the United States among the several states and territories. The means relied upon for making this distribution are stated as follows in the report for the year 1886:

It will be understood that the distribution of the product of the country among the states and territories is a matter of secondary importance, and that its correctness is only approximate. The information made use of for this purpose consists mainly of statements furnished by depositors of unrefined gold and silver at the United States mints and assay offices of the sources of the production of their bullion, reports to this bureau by the large private refineries as to the sources of their output, and reports by express and railroad companies handling bullion and ores in the course of transportation. All such reports are checked by, and compared with, the estimates prepared by the mint officers and by other agents of this bureau selected to compile the statistics of the production of the precious metals in the various states and territories.

Estimates made by mint officers and agents of the production of the states and territories assigned to them have never been accepted by this bureau as conclusive, for the following reasons:

First. That the aggregate production of gold and silver in the United States is ascertained from other and what is considered better sources of information, namely, the record of the mint service itself. Information so supplied is always verified by the disposition of

the product indicated to the bureau by the mints, customhouses, private refineries, and banks. A given product having been ascertained and accounted for, a corresponding quantity only can be distributed among the states and territories of the Union.

Second. As any one familiar with such matters is aware, there is a tendency to exaggerate upon the part of interested or sanguine persons engaged in mining not only as to the value, but as to the character and product of their properties.

Third. From the fact that local agents designated by this bureau are residents of the sections on which they report, and as such particularly selected, it is perhaps warrantable to suppose, as indeed it has sometimes been recognized, that the benefit of a doubt as between a greater or less production reasonably inures to their own divisions of the work. This remark is made without derogation of the quality of the work at the hands of such agents or of the spirit in which such work is undertaken.

Errors of the personal equation in such work rarely fail to go to the credit of the mineral resources of any given section of the country in question.

In the report for 1889 the director writes as follows concerning the estimates of mint officers and agents:

It has never been the practice to adopt the estimates of the agents for particular localities as correctly representing the product of such sections. However valuable these statistics may be as exhibiting in detail the product of particular mines or sections of the country and the condition of the mining industry in the various states, and however conscientiously the officers and agents selected may have performed the duties intrusted to them, the tendency to exaggeration on the part of individual producers is so great and the sources of information in many cases are so imperfect as to preclude the possibility of accepting, in all cases, the aggregate products reported as the product of the United States.

As has been explained, the gold product of the United States finds its way almost entirely, either directly or indirectly, to the mints of the United States for coinage purposes or for manufacture into bars, so that the total gold product of the country is readily ascertained and accounted for. The silver product of our mines is, owing to the large influx of foreign ores, much more difficult to ascertain than that of gold. The estimate we make of that product is based on what is considered more reliable data than the unverified statements of producers of crude bullion, or estimates made by parties living in and interested in the silver-producing districts.

Concerning the assistance given by private refineries and smelting works to enable the director of the mint to make his estimates of the product of the several states and territories, the same report says:

The bureau is greatly indebted to the officers and managers of the large private refineries and smelting works in the United States, as well as to their New York agents, for complete and valuable statistics in regard to the output of the precious metals from their works during the year and the sources from which the ores and base bullion were obtained. Without the co-operation of private works it would be exceedingly difficult, indeed well-nigh impossible, to have ascertained accurately the product of the precious metals in this country, for the reason that these works handle more than half of the gold and fully nine-tenths of the silver from our mines, together with all the foreign silver ores which come to this country for reduction.

Through the information furnished by smelting and reduction works turning out base silver bars the bureau has been able to trace the product of private refineries producing bars of fine gold and fine silver to the original source of production.

The reports received from these refineries are treated as confidential, and the information furnished is used mainly in assisting the bureau to verify the estimates of its own agents as to the production of the several states and territories, and as an additional aid in checking the total product of the United States based on deposits at government institutions and exports of the precious metals.

The following tables from the report for 1889 give the distribution of the gold and silver product, the first table being the estimate by the mint officers and agents in the states and territories, which estimate the director does not accept as correct, and the second the director's own estimate, based upon all the sources of information at his command:

AGGREGATE PRODUCT OF GOLD AND SILVER REPORTED BY MINT OFFICERS AND AGENTS
FOR THE STATES AND TERRITORIES IN 1889.

| STATES AND TERRITORIES. | Total value. | GOLD. | | SILVER. | |
|-------------------------|---------------|--------------|--------------|--------------|----------------|
| | | Fine ounces. | Value. | Fine ounces. | Coining value. |
| Total | \$107,906,543 | 1,689,166 | \$34,918,173 | 56,452,025 | \$72,988,370 |
| Alaska | 963,250 | 46,077 | 952,490 | 8,322 | 10,760 |
| Arizona | 3,811,904 | 52,828 | 1,092,059 | 2,103,630 | 2,719,845 |
| California | 14,852,533 | 666,958 | 13,787,252 | 823,928 | 1,065,281 |
| Colorado | 30,195,275 | 175,902 | 3,636,217 | 20,541,770 | 26,559,058 |
| Georgia | 108,070 | 5,205 | 107,695 | 360 | 465 |
| Idaho | 6,496,055 | 99,445 | 2,055,708 | 3,434,331 | 4,440,347 |
| Montana | 23,832,871 | 183,335 | 3,794,000 | 15,498,814 | 20,068,871 |
| Nevada | 9,547,522 | 154,156 | 3,126,067 | 4,919,724 | 6,368,855 |
| New Mexico | 3,027,425 | 54,969 | 1,136,320 | 1,462,651 | 1,891,105 |
| North Carolina | 150,173 | 7,077 | 146,295 | 3,000 | 3,878 |
| Oregon | 1,393,838 | 65,415 | 1,352,249 | 32,166 | 41,569 |
| South Carolina | 47,084 | 2,266 | 46,852 | 180 | 232 |
| South Dakota | 3,073,288 | 140,898 | 2,912,625 | 124,263 | 160,663 |
| Texas | 460,709 | ----- | ----- | 310,007 | 400,709 |
| Utah | 9,702,725 | 24,866 | 514,025 | 7,106,885 | 9,168,700 |
| Virginia | 4,112 | 198 | 4,100 | 10 | 12 |
| Washington | 299,709 | 9,371 | 193,709 | 81,984 | 106,000 |

MINERAL INDUSTRIES IN THE UNITED STATES.

APPROXIMATE DISTRIBUTION, BY PRODUCING STATES AND TERRITORIES, OF THE PRODUCT OF GOLD AND SILVER IN 1889, AS ESTIMATED BY THE DIRECTOR OF THE MINT.

| STATES AND TERRITORIES. | Total value. | GOLD. | | SILVER. | |
|---|--------------|--------------|--------------|--------------|----------------|
| | | Fine ounces. | Value. | Fine ounces. | Coining value. |
| Total | \$97,733,739 | 1,594,775 | \$32,967,000 | 50,094,571 | \$64,768,730 |
| Alaska | 910,343 | 43,537 | 900,000 | 8,000 | 10,343 |
| Arizona | 2,839,393 | 43,537 | 900,000 | 1,500,000 | 1,939,393 |
| California | 14,034,343 | 628,875 | 13,000,000 | 800,000 | 1,034,343 |
| Colorado | 24,186,868 | 169,312 | 3,500,000 | 16,000,000 | 20,686,868 |
| Georgia | 107,465 | 5,176 | 107,000 | 360 | 465 |
| Idaho | 6,393,959 | 96,750 | 2,000,000 | 3,400,000 | 4,393,959 |
| Michigan | 147,575 | 3,386 | 70,000 | 60,000 | 77,575 |
| Montana | 22,893,939 | 169,312 | 3,500,000 | 15,000,000 | 19,393,939 |
| Nevada | 9,206,060 | 145,125 | 3,000,000 | 4,800,000 | 6,206,060 |
| New Mexico | 2,461,010 | 48,375 | 1,000,000 | 1,130,000 | 1,461,010 |
| North Carolina | 148,878 | 7,014 | 145,000 | 3,000 | 3,878 |
| Oregon | 1,238,787 | 58,050 | 1,200,000 | 30,000 | 38,787 |
| South Carolina | 45,232 | 2,177 | 45,000 | 180 | 232 |
| South Dakota | 2,964,646 | 140,287 | 2,900,000 | 50,000 | 64,646 |
| Texas | 300,000 | | | 232,031 | 300,000 |
| Utah | 9,550,505 | 24,187 | 500,000 | 7,000,000 | 9,050,505 |
| Washington | 278,434 | 8,466 | 175,000 | 80,000 | 103,434 |
| Alabama, Maryland, Tennessee, Virginia, Vermont, and Wyoming. | 26,293 | 1,209 | 25,000 | 1,000 | 1,293 |

The returns from smelting and refining works producing fine or base silver bullion, which were originally made to the director of the mint, have, as already stated, been furnished to the Census Office. By compiling these returns and subtracting all apparent duplications of product through the shipment of base bullion from one establishment to another for refining, another independent estimate is reached, which differs considerably from that of the director of the mint. It is included in the condensed table given hereafter.

Another estimate may be made by adding to the production of fine gold and silver bullion reported by the private refineries the amount of unrefined metal deposited in the mints and United States assay offices as given in the mint director's report. As the latter amounts are given in standard ounces, nine-tenths fine, they require to be converted into fine ounces in making the addition. The results of this method are as follows:

DISTRIBUTION OF THE GOLD PRODUCT IN 1889 (MINT REPORT).

| STATES AND TERRITORIES. | Unrefined gold deposited at mints and assay offices. (Standard ounces.) | Product of private refineries. (Fine ounces.) | Total. (Fine ounces.) | STATES AND TERRITORIES. | Unrefined gold deposited at mints and assay offices. (Standard ounces.) | Product of private refineries. (Fine ounces.) | Total. (Fine ounces.) |
|-------------------------|---|---|-----------------------|-------------------------|---|---|-----------------------|
| Alabama | 125 | | 113 | South Dakota | 151,405 | 2,461 | 153,826 |
| Alaska | 5,327 | 14,640 | 19,434 | Tennessee | 21 | | 19 |
| Arizona | 15,851 | 2,467 | 16,733 | Texas | 79 | | 71 |
| California | 151,058 | 437,446 | 573,398 | Utah | 3,077 | 14,874 | 17,643 |
| Colorado | 110,712 | 92,033 | 191,674 | Virginia | 140 | | 126 |
| Georgia | 4,962 | | 4,466 | Washington | 1,736 | 120 | 1,736 |
| Idaho | 47,104 | 1,878 | 44,272 | Wyoming | 417 | | 375 |
| Maryland | 30 | | 27 | Other sources | 55,353 | | 49,823 |
| Michigan | 3,747 | 810 | 4,182 | Total unrefined | 766,287 | | |
| Montana | 94,360 | 41,484 | 126,408 | Equal fine ounces | 683,658 | | |
| Nevada | 72,509 | 121,118 | 196,376 | Not distributed | | 105,675 | 105,675 |
| New Hampshire | 26 | | 23 | Total | | 847,865 | 1,537,532 |
| New Mexico | 27,737 | 1,209 | 26,172 | Unrefined | | 689,658 | |
| North Carolina | 4,364 | | 3,928 | Jewelers' bars | | 59,009 | 50,009 |
| Oregon | 13,666 | 1,659 | 13,949 | Total | | 1,537,532 | 1,587,532 |
| South Carolina | 2,415 | | 2,174 | | | | |

DISTRIBUTION OF THE SILVER PRODUCT IN 1889 (MINT REPORT).

| STATES AND TERRITORIES. | Unrefined silver deposited at mints and assay offices. (Standard ounces.) | Product of private refineries. (Fine ounces.) | Total. (Fine ounces.) | STATES AND TERRITORIES. | Unrefined silver deposited at mints and assay offices. (Standard ounces.) | Product of private refineries. (Fine ounces.) | Total. (Fine ounces.) |
|-------------------------|---|---|-----------------------|-------------------------------|---|---|-----------------------|
| Alabama..... | 23 | | 21 | South Dakota..... | 29,044 | 94,222 | 120,362 |
| Alaska..... | 971 | 900 | 1,774 | Tennessee..... | 1 | | 1 |
| Arizona..... | 23,712 | 1,985,747 | 2,007,088 | Texas..... | 2,338 | 282,700 | 284,804 |
| California..... | 20,694 | 1,207,116 | 1,225,741 | Utah..... | 13,656 | 6,608,241 | 6,618,531 |
| Colorado..... | 27,277 | 19,169,706 | 19,185,255 | Virginia..... | 6 | | 5 |
| Georgia..... | 336 | | 302 | Washington..... | 2,422 | 4,578 | 6,758 |
| Idaho..... | 63,143 | 1,748,449 | 1,805,278 | Wyoming..... | 49 | | 44 |
| Maryland..... | 9 | | 8 | Other sources..... | 162,771 | | 146,494 |
| Michigan..... | 62,978 | 6,829 | 63,509 | Total unrefined..... | 2,249,668 | | |
| Montana..... | 204,038 | 10,261,544 | 10,526,178 | Equal fine ounces..... | 2,024,700 | | |
| Nevada..... | 1,494,430 | 4,364,939 | 5,628,926 | Not distributed..... | | 1,232,158 | 1,232,158 |
| New Hampshire..... | 1 | | 1 | Total..... | | 47,864,982 | 49,889,682 |
| New Mexico..... | 132,516 | 840,503 | 959,767 | Unrefined..... | | 2,024,700 | |
| North Carolina..... | 6,706 | | 6,035 | Exported in copper matte..... | | 620,000 | 620,000 |
| Oregon..... | 2,430 | 68,350 | 70,537 | Total..... | | 50,518,682 | 50,518,682 |
| South Carolina..... | 117 | | 105 | | | | |

ESTIMATES OF THE PRODUCTION OF GOLD IN THE UNITED STATES IN 1889 FROM SOURCES OTHER THAN THE CENSUS REPORT.

[Fine ounces.]

| STATES AND TERRITORIES. | Estimates from deposits of unrefined gold at mints and assay offices added to fine bars reported by refineries. | Estimates by J. J. Valentine, states and territories west of the Missouri river. | Estimates by mint officers and special agents. | Estimates by the director of the mint. |
|-------------------------|---|--|--|--|
| Total..... | 1,587,532 | 1,573,526 | 1,689,166 | 1,594,775 |
| Alabama..... | 113 | | | |
| Alaska..... | 19,434 | 40,877 | 46,077 | 43,537 |
| Arizona..... | 16,733 | 47,002 | 52,828 | 43,537 |
| California..... | 573,398 | 499,607 | 666,958 | 628,875 |
| Colorado..... | 191,674 | 170,995 | 175,902 | 169,312 |
| Georgia..... | 4,466 | | 5,205 | 5,176 |
| Idaho..... | 44,272 | 155,018 | 99,445 | 96,750 |
| Maryland..... | 27 | | | |
| Michigan..... | 4,182 | | | 3,386 |
| Montana..... | 126,408 | 217,689 | 183,595 | 169,312 |
| Nevada..... | 196,376 | 149,123 | 154,156 | 145,125 |
| New Hampshire..... | 23 | | | |
| New Mexico..... | 26,172 | 21,019 | 54,969 | 48,375 |
| North Carolina..... | 3,628 | | 7,077 | 7,014 |
| Oregon..... | 13,949 | 36,507 | 65,415 | 58,050 |
| South Carolina..... | 2,174 | | 2,266 | 2,177 |
| South Dakota..... | 138,726 | 164,822 | 140,898 | 140,287 |
| Tennessee..... | 19 | | | |
| Texas..... | 71 | | | |
| Utah..... | 17,643 | 739 | 24,806 | 24,187 |
| Virginia..... | 126 | | 198 | |
| Washington..... | 1,736 | 6,386 | 9,371 | 8,466 |
| Wyoming..... | 375 | | | |
| Undistributed..... | 205,507 | 63,622 | | 1,209 |

ESTIMATES OF THE PRODUCTION OF SILVER IN THE UNITED STATES IN 1889 FROM SOURCES OTHER THAN THE CENSUS REPORT.

[Fine ounces.]

| STATES AND TERRITORIES | Estimates from deposits of unrefined silver at mints and assay offices added to fine bars reported by refineries. | Estimates from product of fine and base bullion reported by refineries. | Estimates by J. J. Valentine, states and territories west of the Missouri river. | Estimates by mint officers and special agents. | Estimates by the director of the mint. |
|-------------------------------|---|---|--|--|--|
| Total | 50,518,682 | 51,625,055 | 68,945,359 | 56,452,025 | 50,094,571 |
| Alabama..... | 21 | | | | |
| Alaska..... | 1,774 | 900 | | 8,322 | 8,000 |
| Arizona..... | 2,067,088 | 1,442,209 | 650,708 | 2,103,630 | 1,500,000 |
| California..... | 1,225,741 | 1,267,263 | 766,890 | 823,928 | 800,000 |
| Colorado..... | 19,185,255 | 21,461,603 | 20,576,433 | 20,541,770 | 16,000,000 |
| Georgia..... | 302 | | | 360 | 360 |
| Idaho..... | 1,805,278 | 1,745,820 | 8,647,340 | 3,434,331 | 3,400,000 |
| Maryland..... | 8 | | | | |
| Michigan..... | 63,569 | | | | 60,000 |
| Montana..... | 10,526,178 | 10,266,079 | 17,163,110 | 15,498,814 | 15,000,000 |
| Nevada..... | 5,628,926 | 4,482,938 | 6,758,143 | 4,919,724 | 4,800,000 |
| New Hampshire..... | 1 | | | | |
| New Mexico..... | 959,767 | 1,695,125 | 149,282 | 1,462,651 | 1,130,000 |
| North Carolina..... | 6,035 | | | 3,000 | 3,000 |
| Oregon..... | 70,537 | 68,350 | 32,662 | 32,166 | 30,000 |
| South Carolina..... | 105 | | | 180 | 180 |
| South Dakota..... | 120,362 | 94,222 | | 124,263 | 50,000 |
| Tennessee..... | 1 | | | | |
| Texas..... | 284,604 | 308,810 | | 310,007 | 232,031 |
| Utah..... | 6,618,531 | 6,840,547 | 1,877,406 | 7,106,885 | 7,000,000 |
| Virginia..... | 5 | | | 10 | |
| Washington..... | 6,758 | 4,578 | 90,425 | 81,984 | 80,000 |
| Wyoming..... | 44 | | | | |
| Not distributed..... | 1,378,652 | 1,368,671 | 12,952,960 | | 1,000 |
| Exported in copper matte..... | 629,000 | 629,000 | | | |

The causes of the errors in the mint report are explained by several of the special agents and the director of the mint, who has throughout this investigation extended every courtesy and assistance in his power to the special agent of the census, even furnishing letters of certain mint agents acknowledging and explaining the inaccuracies of their reports. Thus, a mint agent for New Mexico, writing to the director of the mint, says:

I to-day learned that there has been a considerable discrepancy found in the report made by the census taker and that of myself, especially in the returns of last year, and I have made some effort to account for the same. I can only think that the cause of this is to be found in the fact that men are willing to state what they will not swear to. I inclose a copy of the Silver City Enterprise, in which you will see that a very much larger amount of output is claimed for Grant county than I allowed in the report that I mailed to you yesterday. As stated in my report of yesterday, I have reason to believe that the report of 1889 was too large, and I am sure that it was also for the year preceding it.

Writing to the census, the same agent says:

I am sure now that my mint report for 1889 was too high, and it simply shows that men are willing to state in a bragging way what they will not swear to. This year I have cut my figures down considerably in my mint report, which has already been mailed. * * * I found out that one mine that is a large producer put out only about half of the amount that I reported and that was given to me by one who certainly knew better, for he was in a position to know; but I know now how it happened: he was trying then to sell the extension to the mine.

One of the most reliable agents for the census, explaining the differences between the census and mint reports for California, says:

It may be said in general terms that our men visited the mines or owners personally and obtained their information from headquarters, while the mint obtained all its information by answers to circulars, sending no one into the field for information. In a great number of instances they accepted estimates which we were not permitted to do by the scheme by which the census facts were collected. We were obliged to confine ourselves to specified mines and specified questions, ignoring altogether any general information which might have been obtained. We could not accept the estimates of storekeepers and postmasters as to what they thought their camps shipped, but had to confine ourselves to facts and known mines. Hence all the estimates from small mines and from Chinese mines contained in mint reports are absent in ours. Many times in the mint reports these were duplicated. Moreover, the mint reporters themselves found that they were imposed upon by people anxious to give their camps a good name in official reports. We got all the Chinese we could and adopted good measures to obtain their figures. We had letters written in Chinese by the consul telling them to give us the proper reports. The mint took no such precaution, as they could only send circulars, and to those no Chinese responded.

In the matter of hydraulic mines the mint reports may be better than ours, for they may know from their position as recipients of the gold where it came from or can estimate by the camp. In our case, we were in most places received in the same way and the answer was: "Closed by injunctions of United States courts". Of course under these circumstances they could give no information as to product, for it might be used against them by the government, which asked for the information. We tried to overcome this feeling, but it was impossible. I am perfectly certain that our figures are altogether more accurate than those of the mint.

In one county in California the mint gives the same mine under two names, the product of one of these names being \$75,000 and the other \$18,000. The census agent in that county says that the smaller of these two figures is a large exaggeration, and, moreover, that the mint has made a triplicate report of some of the mines in this county; thus, one item purports to be the yield of the "White river mines", another is the yield of the small mines of White river, and then the mines of White river are given singly. In this way a triplicate report is made of most of the mines of the district. One of the mines of this county was reported to the mint as having produced over \$50,000. The mine is reported to the census by the owner as having produced not over \$1,200. The agent says further:

It frequently occurs that mines are relocated, first by one party and then another, and thus have several names, and generally each of these names of a paying mine finds its way to the mint. The department and the mint assume that mining is done by corporations. I do not think there are any paying mines in these 2 counties conducted by any firm which could maintain an action at law, either as a corporation or as a copartnership. 3 companies kept books (as they claimed), but in each case the books were said to be in San Francisco (somewhere). This circumstance of having no legal organization is what causes these "joint companies" to be known by so many names and to be thus duplicated and triplicated by the mint.

Another census agent for California says:

One difficulty you will find with the mint figures is that the production of a mine is frequently credited to the county from which the gold shipment is made to the mint. Thus La Porte, in Plumas county, gets the credit of gold produced in northern Sierra county; Camptownville, in Yuba county, the credit of the production in a part of Sierra county. Another source of error in the mint figures is that fraudulent, or rather incorrect, statements are willfully made, giving large products to mines that are mere prospects.

A census agent in Colorado writes:

In most cases the census returns are much more reliable than the mint reports. Two reasons may be given why this should be so. In the first place, parties furnishing information for the census are closely questioned; and, secondly, the law provides a penalty for furnishing false information to census enumerators. On the other hand, information furnished the mint is sent by mail as an act of good nature, and the sender may lie as much as he likes with little risk of exposure.

From the evidence accumulated in the preceding pages it is apparent that the figures published as representing the production of the precious metals in the United States up to recent years have in many cases been mere estimates, sometimes careless and wild, which for the most part have been reduced in subsequent years as their exaggerations became more apparent. It is, indeed, quite probable that even the final figures of years prior to 1880, as published in the last report of the director of the mint, are still much above the actual production of gold and silver, while the published distribution of the production among the states and territories has always been inaccurate.

The Eleventh Census has sought to profit by this experience and to obtain the actual facts as nearly as possible. The reports of the director of the mint, and especially those reports which purport to give the actual production of the individual mines in several of the states, were extremely useful. With sworn confidential returns from the same mines it was easy to ascertain where the mint reports were in error. It was found that a great number of the mines credited in that report with an important output were in fact closed and did not produce anything during the year, and in some cases had not been worked for a number of years. In other cases "Chinese" and "small mines" were credited with considerable amounts, while there were neither Chinese nor small mines in the county. In still other cases the owners of the working mines, knowing that the name and output of the mine would be published in the mint report, gave grossly exaggerated figures, which in the confidential sworn reports made to the census shrunk to much more modest ones.

As a final check on the accuracy of the census report, special agents were sent to the districts where these reports differed materially from the mint reports, and with the figures credited to each mine and to each county as returned to the mint and to the census arranged in parallel columns, they were required to investigate and report on every case of material difference. No reasonable precaution was neglected in order to secure the fullest and most accurate returns possible for this important industry. Absolute accuracy is unattainable for the reasons already given, but it is believed that the statistics given in this report are correct within the limits of reasonable accuracy, and that the distribution of the product among the states and territories is very much more reliable than any statement heretofore made on this subject.

CENSUS RETURNS OF GOLD AND SILVER PRODUCTION.

Unquestionably the most accurate estimate of the total gold produced is that adopted by the director of the mint and based upon the deposits at the several United States mints and assay offices and at the private refineries. The census report has therefore added to the direct returns obtained from producers such of these deposits as were "unaccounted for" in these returns, which evidently represent the gold exported in ore or matte and the many very small sources of production which it will always be impossible to secure directly.

The total production of gold as given in this report, therefore, is made up of the mint and refinery deposits and of gold exported directly by producers. The distribution of this product among the several states and territories differs in some cases widely from, and is unquestionably much more accurate than, the estimates given in other reports.

MINERAL INDUSTRIES IN THE UNITED STATES.

The following tables give the production and other statistics of gold and silver as ascertained by the census investigation:

CENSUS STATISTICS OF THE GOLD PRODUCT OF THE MINES IN THE UNITED STATES IN 1889.

| PRODUCT. | Fine ounces. | Value. |
|--|--------------|--------------|
| Bullion of domestic production at mint and assay offices..... | 1,546,019 | \$31,959,612 |
| Gold of domestic production (other than United States mint or assay office bars) exported from the United States as bullion or as gold contained in copper matte..... | 58,652 | 1,212,444 |
| Bullion of domestic production reported by 26 private refineries in the United States as having been made into bars for manufacturers and jewelers..... | 50,009 | 1,033,778 |
| Total..... | 1,654,680 | 34,205,834 |
| Deduct foreign bullion reported by private refineries in the United States as contained in their product of fine gold bars deposited at mint and assay offices and there classified as of domestic production..... | 63,811 | 1,319,090 |
| Domestic product for 1889..... | 1,590,869 | 32,886,744 |

This total amount exceeds that which the director of the mint obtained by this method by \$86,744, which is the aggregate of two items, one of gold contained in certain copper matte and the other of bullion exported, and which were not included in the mint report. Of this total the census direct returns, including certain estimates made upon the spot by census subagents of the production of mines from which official schedules could not be obtained, amount to \$28,638,202, and the excess of gold deposited at mints and private refineries over amount traced to its source amounts to \$4,248,542, making a total of \$32,886,744.

As shown by the above table, the census investigation has traced directly to the mines which produced it about 87 per cent of the total gold output. In apportioning the gold produced among the states and territories the distribution of this excess of deposits over census returns has necessarily been arbitrary, but in making it consideration has been given to the relative probability of accuracy of the census figures in each state, according to the extent of placer mines in these states, and the likelihood that the direct census returns were more correct in one state than in another. Guided by this consideration, the following distribution of this excess of deposits over the census returns is made, and these figures appear in the summary of each state as "undistributed" gold:

DISTRIBUTION OF UNDISTRIBUTED GOLD, BY STATES AND TERRITORIES.

| | |
|-------------------|-----------|
| Alaska..... | \$100,000 |
| Arizona..... | 150,000 |
| California..... | 2,152,374 |
| Colorado..... | 100,000 |
| Montana..... | 846,168 |
| Nevada..... | 150,000 |
| New Mexico..... | 100,000 |
| Oregon..... | 200,000 |
| South Dakota..... | 200,000 |
| Utah..... | 100,000 |
| Washington..... | 150,000 |
| Total..... | 4,248,542 |

The production of silver is much more easily traced to its source than is that of gold, for the reasons that it is produced in larger quantity, and, being about 20 times as heavy for the same value, is transported through channels more easily followed. The silver produced in the United States goes either to the private refineries, to the mint, or is exported direct in ore, in copper matte, or in base bullion. The total, obtained by aggregating the amounts reported from these channels, corresponds with a surprising degree of closeness to the returns obtained directly from the mines, and is a very convincing proof of the thoroughness of the census investigation and of the accuracy of its returns.

CENSUS REPORT OF THE SILVER PRODUCT OF MINES IN THE UNITED STATES IN 1889.

| PRODUCT. | Fine ounces. | Value at \$1.2929 per ounce. |
|---|--------------|------------------------------|
| Domestic product of fine silver bars reported by the 10 private refineries of the United States who manufacture all the fine silver bars..... | 47,864,982 | \$61,884,635 |
| Unrefined silver of domestic production deposited at mints and assay offices..... | 2,024,700 | 2,617,735 |
| Silver exported in base bullion, in copper matte, and in ore (a)..... | 1,506,771 | 1,948,104 |
| Estimated silver product for 1889..... | 51,396,453 | 66,450,474 |
| Census direct returns from the mines..... | 51,354,851 | 66,396,983 |

a Of the silver exported, 877,871 ounces which went out in copper matte and in bullion originating in Montana were not included in the mint report.

The following table gives the census returns of the gold and silver production in the United States in 1889, distributed to the states where the metal was mined:

PRODUCTION OF GOLD AND SILVER IN THE CENSUS YEAR 1889, BY STATES AND TERRITORIES. (a)

| STATES AND TERRITORIES. | Total value. | GOLD. | | SILVER. | | STATES AND TERRITORIES. | Total value. | GOLD. | | SILVER. | |
|-------------------------|--------------|--------------|--------------|--------------|--------------|-------------------------|--------------|--------------|-------------|--------------|--------------|
| | | Fine ounces. | Value. | Fine ounces. | Value. | | | Fine ounces. | Value. | Fine ounces. | Value. |
| Total | \$99,283,732 | 1,590,869 | \$32,886,744 | 51,354,851 | \$66,396,988 | Montana..... | \$20,608,287 | 151,861 | \$3,139,327 | 13,511,455 | \$17,468,969 |
| Alabama | 2,639 | 123 | 2,539 | 77 | 100 | Nevada..... | 9,578,536 | 169,617 | 3,506,295 | 4,696,605 | 6,072,241 |
| Alaska | 916,568 | 43,762 | 904,650 | 9,219 | 11,918 | New Mexico..... | 2,433,239 | 39,457 | 815,655 | 1,251,124 | 1,617,578 |
| Arizona | 3,254,151 | 44,029 | 910,174 | 1,812,961 | 2,343,977 | North Carolina... | 150,674 | 7,077 | 146,795 | 3,000 | 3,879 |
| California..... | 13,960,529 | 608,882 | 12,586,722 | 1,062,578 | 1,373,897 | Oregon..... | 987,691 | 46,648 | 964,309 | 17,851 | 23,382 |
| Colorado..... | 27,641,619 | 187,861 | 3,883,859 | 18,375,551 | 23,757,751 | South Carolina... | 47,065 | 2,266 | 46,853 | 179 | 232 |
| Georgia..... | 108,069 | 5,204 | 107,605 | 359 | 464 | South Dakota..... | 3,226,468 | 149,533 | 3,091,137 | 104,672 | 135,331 |
| Idaho..... | 6,040,641 | 95,983 | 1,984,159 | 3,137,508 | 4,056,482 | Texas..... | 425,061 | 330 | 6,828 | 323,438 | 418,173 |
| Maryland..... | 10,369 | 501 | 10,369 | ..... | ..... | Utah..... | 9,544,680 | 23,591 | 487,666 | 7,005,193 | 9,957,014 |
| Michigan..... | 165,925 | 4,210 | 87,040 | 14,607 | 18,885 | Virginia..... | 4,113 | 198 | 4,100 | 10 | 13 |
| | | | | | | Washington..... | 222,951 | 9,095 | 186,150 | 28,464 | 36,861 |
| | | | | | | Wyoming..... | 14,512 | 711 | 14,512 | ..... | ..... |

a Computed to the nearest whole ounce.

DETAILED DISTRIBUTION OF GOLD AND SILVER, BY STATES AND TERRITORIES.

The following table gives the distribution of gold and silver of the territory of Alaska, by mining districts:

GOLD AND SILVER PRODUCTION IN ALASKA TERRITORY.

| DISTRICTS. | Total. | Gold. | Silver. |
|-------------------------|-----------|-----------|----------|
| Total..... | \$916,568 | \$904,650 | \$11,918 |
| Harris..... | 684,768 | 679,850 | 4,918 |
| Sheep Creek..... | 10,000 | 3,000 | 7,000 |
| Silver Bow Basin..... | 25,800 | 25,800 | ..... |
| Yukon..... | 96,000 | 96,000 | ..... |
| Undistributed gold..... | 100,000 | 100,000 | ..... |

The following table gives the gold and silver production of states of the Appalachian range:

GOLD AND SILVER PRODUCTION IN STATES OF THE APPALACHIAN RANGE.

| STATES. | Total. | Gold. | Silver. |
|---|-----------|-----------|---------|
| Total..... | \$322,949 | \$318,261 | \$4,688 |
| ALABAMA.—Clay, Cleburne, and Tallapoosa counties, and undistributed petty mining. | 2,639 | 2,539 | 100 |
| GEORGIA.—Cherokee, Haralson, McDuffie, Lumpkin, and White counties, and undistributed petty mining (total for state). | 108,069 | 107,605 | 464 |
| MARYLAND.—Montgomery county (total for state)..... | 10,369 | 10,369 | ..... |
| NORTH CAROLINA.—Burke, Cabarrus, Clay, Cleveland, Davidson, Franklin, Guilford, Henderson, Mecklenburg, Montgomery, Moore, Randolph, Rowan, Stanly, and Union counties, and undistributed petty mining (total for state). | 150,674 | 146,795 | 3,879 |
| SOUTH CAROLINA.—Chesterfield, Lancaster, Pickens, Union, and York counties, and undistributed petty mining (total for state). | 47,065 | 46,853 | 232 |
| VIRGINIA.—Buckingham, Cupeper, Fluvanna, Orange, and Stafford counties, and undistributed petty mining (total for state). | 4,113 | 4,100 | 13 |

MINERAL INDUSTRIES IN THE UNITED STATES.

The following table gives the production of gold and silver by subdivisions of states and territories:

GOLD AND SILVER PRODUCTION, BY SUBDIVISIONS OF STATES AND TERRITORIES.

| ARIZONA. | | | | COLORADO—Continued. | | | |
|--------------------------|-------------|------------|-------------|-----------------------------|-------------|-----------|-------------|
| COUNTIES. | Total. | Gold. | Silver. | COUNTIES. | Total. | Gold. | Silver. |
| Total | \$3,254,151 | \$910,174 | \$2,343,977 | Lake | \$8,467,151 | \$221,167 | \$8,245,984 |
| Cochise | 811,675 | 62,370 | 749,305 | La Plata | 7,611 | 4,791 | 2,820 |
| Gila | 61,805 | 240 | 61,625 | Ouray | 1,901,131 | 236,309 | 1,664,822 |
| Graham | 5,244 | 634 | 4,560 | Park | 449,509 | 127,886 | 321,674 |
| Maricopa | 41,166 | 39,849 | 1,317 | Pitkin | 7,362,422 | 22,238 | 7,340,184 |
| Mohave | 200,290 | 42,799 | 217,491 | Rio Grande | 10,891 | 10,131 | 760 |
| Pima | 738,316 | 57,306 | 681,010 | Routt | 18,400 | 18,400 | ..... |
| Pinal | 194,135 | 1,710 | 192,425 | Saguache | 28,554 | 5,458 | 23,096 |
| Yavapai | 809,758 | 454,921 | 354,837 | San Juan | 610,362 | 142,687 | 467,675 |
| Yuma | 181,702 | 100,295 | 81,407 | San Miguel | 1,107,006 | 306,328 | 800,678 |
| Undistributed gold | 150,000 | 150,000 | ..... | Summit | 892,447 | 274,352 | 618,095 |
| | | | | Undistributed gold | 100,000 | 100,000 | ..... |
| CALIFORNIA. | | | | IDAHO. | | | |
| Total | 13,960,529 | 12,586,722 | 1,373,807 | Total | 6,040,641 | 1,934,159 | 4,056,482 |
| Amador | 911,252 | 908,246 | 3,006 | Ada | 3,372 | 3,307 | 65 |
| Butte | 301,502 | 300,680 | 912 | Alturas | 479,815 | 13,869 | 465,946 |
| Calaveras | 736,881 | 733,058 | 3,823 | Bingham | 20,277 | 20,236 | 41 |
| Colusa | 4,187 | 4,061 | 126 | Boise | 547,573 | 299,099 | 248,474 |
| Del Norte | 17,400 | 17,400 | ..... | Cassia | 31,090 | 12,671 | 18,419 |
| Eldorado | 183,575 | 183,210 | 365 | Custer | 893,102 | 164,475 | 728,627 |
| Fresno | 207,523 | 180,697 | 26,826 | Elmore | 341,148 | 314,132 | 27,016 |
| Humboldt | 78,847 | 78,709 | 138 | Idaho | 254,357 | 242,356 | 12,001 |
| Inyo | 148,025 | 43,645 | 104,380 | Kootenai | 23,500 | 20,000 | 8,500 |
| Kern | 60,750 | 60,472 | 278 | Latah | 1,000 | 1,000 | ..... |
| Lassen | 22,700 | 22,026 | 674 | Lemhi | 507,967 | 377,868 | 130,099 |
| Los Angeles | 79,109 | 78,609 | 500 | Logan | 443,557 | 24,107 | 419,450 |
| Mariposa | 20,052 | 20,052 | ..... | Owyhee | 690,822 | 258,045 | 432,777 |
| Merced | 100 | 100 | ..... | Shoshone | 1,779,734 | 222,712 | 1,557,022 |
| Mono | 206,398 | 180,408 | 25,990 | Washington | 18,327 | 10,282 | 8,045 |
| Monterey | 3,600 | 3,600 | ..... |  |  |  |  |
| Napa | 50,206 | 307 | 49,899 | MICHIGAN. | | | |
| Nevada | 2,006,757 | 1,967,649 | 39,108 | Total | 105,925 | 87,040 | 18,885 |
| Orange | 950 | ..... | 950 | Gogebic and Marquette | 99,357 | 87,040 | 12,317 |
| Placer | 1,215,594 | 1,211,209 | 4,385 | Houghton and Keweenaw | 6,568 | ..... | 6,568 |
| Plumas | 499,430 | 499,077 | 353 | | | | |
| Sacramento | 166,000 | 166,000 | ..... | MONTANA. | | | |
| San Bernardino | 1,108,222 | 2,821 | 1,105,401 | Total | 20,608,287 | 3,139,327 | 17,468,960 |
| San Diego | 251,073 | 251,071 | 2 | Beaverhead | 904,656 | 35,602 | 869,054 |
| Santa Barbara | 7,045 | 7,045 | ..... | Deerlodge | 6,346,230 | 136,748 | 6,209,482 |
| Shasta | 332,996 | 328,964 | 4,032 | Fergus | 352,703 | 348,896 | 3,807 |
| Sierra | 1,329,192 | 1,327,290 | 1,902 | Jefferson | 1,709,599 | 297,420 | 1,412,179 |
| Siskiyou | 808,198 | 807,910 | 288 | Lewis and Clarke | 1,707,642 | 1,080,321 | 627,321 |
| Stanislaus | 15,955 | 15,955 | ..... | Madison | 12,435 | 11,571 | 864 |
| Trinity | 683,542 | 683,427 | 115 | Meagher | 50,143 | 342 | 49,801 |
| Tulare | 17,110 | 17,109 | 1 | Missoula | 117,895 | 4,750 | 113,145 |
| Tuolumne | 228,550 | 228,337 | 213 | Silverbow | 7,896,388 | 377,509 | 7,518,879 |
| Ventura | 6,831 | 6,831 | ..... | Undistributed gold | 1,510,596 | 846,168 | 664,428 |
| Yuba | 98,513 | 98,373 | 140 | | | | |
| Undistributed gold | 2,152,374 | 2,152,374 | ..... | NEVADA. | | | |
| COLORADO. | | | | Total | 9,578,536 | 3,506,295 | 6,072,241 |
| Total | 27,641,610 | 3,883,859 | 23,757,751 | Churchill | 28,250 | 1,428 | 26,822 |
| Boulder | 417,782 | 310,725 | 107,057 | Douglas | 3,631 | 3,585 | 46 |
| Chaffee | 550,429 | 260,627 | 289,802 | Elko | 837,561 | 261,653 | 575,908 |
| Clear Creek | 2,715,003 | 372,400 | 2,342,603 | Esmeralda | 653,088 | 111,764 | 541,324 |
| Conejos | 6,213 | 3,099 | 3,114 | Eureka | 1,239,243 | 178,946 | 1,060,297 |
| Custer | 58,904 | 19 | 58,885 | Humboldt | 11,730 | 447 | 11,283 |
| Dolores | 516,205 | 38,512 | 477,693 | Lander | 194,147 | 88,106 | 106,041 |
| Eagle | 471,941 | 121,654 | 350,287 | Lincoln | 158,326 | 65,546 | 92,780 |
| Gitpin | 1,721,747 | 1,239,420 | 482,327 | | | | |
| Gunnison | 205,882 | 16,162 | 189,720 | | | | |
| Hinsdale | 21,969 | 1,494 | 20,475 | | | | |

GOLD AND SILVER PRODUCTION, BY SUBDIVISIONS, ETC.—Continued.

| NEVADA—Continued. | | | | SOUTH DAKOTA—Continued. | | | |
|--------------------------|-------------|-------------|--------------|--------------------------|-------------|-----------|-------------|
| COUNTIES. | Total. | Gold. | Silver. | COUNTIES. | Total. | Gold. | Silver. |
| Lyon | \$249, 135 | \$163, 251 | \$145, 884 | Pennington | \$31, 079 | \$31, 079 | ..... |
| Nye | 185, 324 | 3, 760 | 181, 564 | Undistributed gold | 200, 000 | 200, 000 | ..... |
| Storey | 5, 739, 049 | 2, 510, 998 | 3, 228, 051 | TEXAS. | | | |
| Washoe | 11, 046 | 10, 896 | 150 | Total | 425, 091 | 6, 823 | \$418, 173 |
| White Pine | 118, 006 | 15, 915 | 102, 091 | El Paso | 89, 443 | 6, 823 | 82, 620 |
| Undistributed gold | 150, 000 | 150, 000 | ..... | Presidio | 335, 553 | ..... | 335, 553 |
| NEW MEXICO. | | | | UTAH. | | | |
| Total | 2, 433, 233 | 815, 655 | 1, 6 17, 578 | Total | 9, 544, 680 | 487, 666 | 9, 057, 014 |
| Bernalillo | 6, 740 | 6, 740 | ..... | Beaver | 363, 322 | 327 | 362, 995 |
| Colfax | 23, 221 | 23, 166 | 55 | Juab | 3, 112, 422 | 213, 115 | 2, 899, 307 |
| Donna Ana | 73, 025 | ..... | 73, 025 | Piute | 8, 995 | 1, 395 | 7, 600 |
| Grant | 1, 121, 237 | 436, 025 | 685, 212 | Salt Lake | 687, 263 | 73, 887 | 613, 376 |
| Lincoln | 55, 208 | 52, 100 | 3, 108 | Summit | 5, 029, 063 | 88, 294 | 4, 940, 739 |
| Rio Arriba | 5, 340 | 5, 240 | 100 | Tooele | 124, 157 | 10, 648 | 113, 509 |
| Santa Fe | 92, 216 | 41, 694 | 50, 522 | Wasatch | 2, 000 | ..... | 2, 000 |
| Sierra | 844, 081 | 135, 933 | 708, 148 | Washington | 117, 438 | ..... | 117, 438 |
| Socorro | 112, 165 | 14, 757 | 97, 403 | Undistributed gold | 100, 000 | 100, 000 | ..... |
| Undistributed gold | 100, 000 | 100, 000 | ..... | WASHINGTON. | | | |
| OREGON. | | | | Total | 222, 951 | 186, 150 | 36, 801 |
| Total | 987, 691 | 964, 309 | 23, 382 | Asotin | 1, 500 | 1, 500 | ..... |
| Baker | 308, 719 | 307, 097 | 1, 622 | Kittitas | 10, 822 | 10, 822 | ..... |
| Coos | 21, 327 | 21, 327 | ..... | Okanogan | 20, 157 | 4, 757 | 15, 400 |
| Crook | 300 | 300 | ..... | Snohomish | 494 | 300 | 194 |
| Curry | 4, 879 | 4, 879 | ..... | Stevens | 35, 478 | 14, 271 | 21, 207 |
| Douglas | 2, 500 | 2, 500 | ..... | Walla Walla | 2, 500 | 2, 500 | ..... |
| Grant | 93, 553 | 73, 613 | 19, 940 | Whitman | 2, 000 | 2, 000 | ..... |
| Jackson | 31, 438 | 31, 433 | 5 | Undistributed gold | 150, 000 | 150, 000 | ..... |
| Josephine | 49, 915 | 49, 525 | 390 | WYOMING. | | | |
| Malheur | 38, 350 | 38, 350 | ..... | Total | 14, 512 | 14, 512 | ..... |
| Union | 236, 710 | 235, 285 | 1, 425 | Albany | 6, 172 | 6, 172 | ..... |
| Undistributed gold | 200, 000 | 200, 000 | ..... | Fremont | 8, 340 | 8, 340 | ..... |
| SOUTH DAKOTA. | | | | | | | |
| Total | 3, 226, 468 | 3, 091, 137 | 135, 331 | | | | |
| Custer | 3, 500 | 3, 500 | ..... |  |  |  |  |
| Lawrence | 2, 991, 889 | 2, 856, 558 | 135, 331 | | | | |

PER CAPITA PRODUCTION OF GOLD AND SILVER IN 1889.

The per capita production of the precious metals in the several producing states is given in the table following. In Nevada gold and silver production is almost the sole industry of the state, and amounts to \$209.3166 per capita, while Montana, Idaho, Colorado, and Arizona follow in this order, the chief occupation of the people being the production of the precious metals.

The average production of gold and silver in the United States amounted in 1889 to \$1.5847 per capita of the entire population of the country. In 1880 the per capita production of the precious metals was \$1.4842. The production of gold and silver has therefore increased somewhat more rapidly than population in the past 10 years.

MINERAL INDUSTRIES IN THE UNITED STATES.

PER CAPITA PRODUCTION OF GOLD AND SILVER, BY STATES AND TERRITORIES.

| STATES AND TERRITORIES. | Population. | Total production of gold and silver in 1889. | Production of gold and silver per capita. | STATES AND TERRITORIES. | Population. | Total production of gold and silver in 1889. | Production of gold and silver per capita. |
|-------------------------|-------------|--|---|-------------------------|-------------|--|---|
| The United States | 62,622,250 | | | Michigan | 2,093,889 | \$105,925 | \$0.0506 |
| Alaska | 30,329 | | | Montana | 132,159 | 20,608,287 | 155.9356 |
| Total | 62,652,579 | \$99,283,732 | \$1.5647 | Nevada | 45,761 | 9,578,536 | 209.3166 |
| Alabama | 1,513,617 | 2,639 | 0.0017 | New Mexico | 153,593 | 2,433,233 | 15.8421 |
| Alaska | 30,329 | 916,568 | 30.2208 | North Carolina | 1,617,947 | 150,674 | 0.0931 |
| Arizona | 59,620 | 3,254,151 | 54.5815 | Oregon | 313,767 | 987,691 | 3.1478 |
| California | 1,208,130 | 13,960,529 | 11.5555 | South Carolina | 1,151,149 | 47,085 | 0.0409 |
| Colorado | 412,198 | 27,641,610 | 67.0591 | South Dakota | 328,808 | 3,226,468 | 9.8126 |
| Georgia | 1,837,353 | 108,069 | 0.0588 | Texas | 2,235,523 | 425,001 | 0.1901 |
| Idaho | 84,385 | 6,040,641 | 71.5843 | Utah | 207,905 | 9,544,680 | 45.9089 |
| Maryland | 1,042,399 | 10,369 | 0.0099 | Virginia | 1,655,980 | 4,113 | 0.0025 |
| | | | | Washington | 349,399 | 222,951 | 0.6381 |
| | | | | Wyoming | 60,705 | 14,512 | 0.2391 |

STATE AND PER CAPITA PRODUCTION OF GOLD AND SILVER ACCORDING TO RANK.

| Precious metal producing states and territories in order of their value of production. | Total gold and silver production. | Precious metal states and territories in order of their production per capita. | Production of gold and silver per capita. | Precious metal producing states and territories in order of their value of production. | Total gold and silver production. | Precious metal states and territories in order of their production per capita. | Production of gold and silver per capita. |
|--|-----------------------------------|--|---|--|-----------------------------------|--|---|
| 1. Colorado | \$27,641,610 | Nevada | \$209.3166 | 12. Texas | \$425,001 | Washington | \$0.6381 |
| 2. Montana | 20,608,287 | Montana | 155.9356 | 13. Washington | 222,951 | Wyoming | 0.2391 |
| 3. California | 13,960,529 | Idaho | 71.5843 | 14. North Carolina | 150,674 | Texas | 0.1901 |
| 4. Nevada | 9,578,536 | Colorado | 67.0591 | 15. Georgia | 108,069 | North Carolina | 0.0931 |
| 5. Utah | 9,544,680 | Arizona | 54.5815 | 16. Michigan | 105,925 | Georgia | 0.0588 |
| 6. Idaho | 6,040,641 | Utah | 45.9089 | 17. South Carolina | 47,085 | Michigan | 0.0506 |
| 7. Arizona | 3,254,151 | Alaska | 30.2208 | 18. Wyoming | 14,512 | South Carolina | 0.0409 |
| 8. South Dakota | 3,226,468 | New Mexico | 15.8421 | 19. Maryland | 10,369 | Maryland | 0.0099 |
| 9. New Mexico | 2,433,233 | California | 11.5555 | 20. Virginia | 4,113 | Virginia | 0.0025 |
| 10. Oregon | 987,691 | South Dakota | 9.8126 | 21. Alabama | 2,639 | Alabama | 0.0017 |
| 11. Alaska | 916,568 | Oregon | 3.1478 | | | | |

The production as given in the report of the Tenth Census is compared in the following tables with the production in 1889 as given in preceding pages. The relative importance of the several states is shown.

COMPARISON OF BULLION PRODUCTION IN THE CALENDAR YEAR 1889 WITH PRODUCTION IN CENSUS YEAR ENDED MAY 31, 1880.

| STATES AND TERRITORIES. | ELEVENTH CENSUS. | | | TENTH CENSUS. | | |
|-------------------------|------------------|--------------|--------------|---------------|--------------|--------------|
| | Total. | Gold. | Silver. | Total. | Gold. | Silver. |
| Total | \$99,283,732 | \$32,886,744 | \$66,396,988 | \$74,490,620 | \$33,379,663 | \$41,110,957 |
| Alabama | 2,639 | 2,539 | 100 | 1,301 | 1,301 | |
| Alaska | 916,568 | 904,650 | 11,915 | 6,002 | 5,951 | 51 |
| Arizona | 3,254,151 | 910,174 | 2,343,977 | 2,537,790 | 211,965 | 2,325,825 |
| California | 13,960,529 | 12,586,722 | 1,373,807 | 18,301,828 | 17,150,941 | 1,150,887 |
| Colorado | 27,641,610 | 3,883,859 | 23,757,751 | 19,249,172 | 2,699,898 | 16,549,274 |
| Dakota | 3,226,468 | 3,091,137 | 135,331 | 3,376,656 | 3,305,843 | 70,813 |
| Georgia | 108,069 | 107,605 | 464 | 81,361 | 81,029 | 332 |
| Idaho | 6,040,641 | 1,984,159 | 4,056,482 | 1,944,203 | 1,479,653 | 464,550 |
| Maine | | | | 10,199 | 2,999 | 7,200 |
| Maryland | 10,369 | 10,369 | | | | |
| Michigan | 105,925 | 87,040 | 18,885 | 25,858 | | 25,858 |
| Montana | 20,608,287 | 3,139,327 | 17,468,960 | 4,710,835 | 1,805,767 | 2,905,068 |
| Nevada | 9,578,536 | 3,506,295 | 6,072,241 | 17,318,909 | 4,888,242 | 12,430,667 |
| New Hampshire | | | | 26,999 | 10,999 | 16,000 |
| New Mexico | 2,433,233 | 815,655 | 1,617,578 | 441,691 | 49,354 | 392,337 |
| North Carolina | 150,674 | 148,795 | 3,879 | 119,093 | 118,953 | 140 |
| Oregon | 987,691 | 964,309 | 23,382 | 1,125,494 | 1,097,701 | 27,793 |
| South Carolina | 47,085 | 46,853 | 232 | 13,096 | 13,040 | 56 |
| Tennessee | | | | 1,998 | 1,998 | |
| Texas | 425,001 | 6,828 | 418,173 | | | |
| Utah | 9,544,680 | 487,666 | 9,057,014 | 5,034,674 | 291,587 | 4,743,087 |
| Virginia | 4,113 | 4,100 | 13 | 9,321 | 9,321 | |
| Washington | 222,951 | 186,150 | 36,801 | 136,819 | 135,800 | 1,019 |
| Wyoming | 14,512 | 14,512 | | 17,321 | 17,321 | |

The following table gives the percentage of product of the various states and territories:

PERCENTAGE OF PRODUCT, BY STATES AND TERRITORIES.

| STATES AND TERRITORIES. | ELEVENTH CENSUS. | | | TENTH CENSUS. | | |
|-------------------------|------------------|--------|---------|---------------|--------|---------|
| | Total. | Gold. | Silver. | Total. | Gold. | Silver. |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Alabama | | 0.01 | | | | |
| Alaska | 0.92 | 2.75 | 0.02 | 0.01 | 0.02 | |
| Arizona | 3.28 | 2.77 | 3.53 | 3.41 | 0.64 | 5.68 |
| California | 14.06 | 38.27 | 2.07 | 24.57 | 51.38 | 2.80 |
| Colorado | 27.84 | 11.81 | 35.78 | 25.84 | 8.09 | 40.25 |
| Dakota | 3.25 | 9.40 | 0.20 | 4.53 | 9.90 | 0.17 |
| Georgia | 0.11 | 0.33 | | 0.11 | 0.24 | |
| Idaho | 6.08 | 6.63 | 6.11 | 2.61 | 4.43 | 1.13 |
| Maine | | | | 0.01 | 0.01 | 0.02 |
| Maryland | 0.01 | 0.03 | | | | |
| Michigan | 0.11 | 0.27 | 0.03 | 0.04 | | 0.66 |
| Montana | 20.76 | 9.55 | 26.31 | 6.33 | 5.41 | 7.07 |
| Nevada | 9.65 | 10.66 | 9.14 | 23.25 | 14.64 | 30.24 |
| New Hampshire | | | | 0.04 | 0.03 | 0.04 |
| New Mexico | 2.45 | 2.48 | 2.44 | 0.59 | 0.15 | 0.95 |
| North Carolina | 0.15 | 0.45 | 0.01 | 0.16 | 0.36 | |
| Oregon | 1.00 | 2.93 | 0.03 | 1.51 | 3.29 | 0.07 |
| South Carolina | 0.05 | 0.14 | | 0.02 | 0.04 | |
| Tennessee | | | | | 0.01 | |
| Texas | 0.43 | 0.02 | 0.63 | | | |
| Utah | 9.61 | 1.48 | 13.64 | 6.76 | 0.87 | 11.54 |
| Virginia | | 0.01 | | 0.01 | 0.03 | |
| Washington | 0.22 | 0.57 | 0.06 | 0.18 | 0.41 | |
| Wyoming | 0.02 | 0.04 | | 0.02 | 0.05 | |

NOTES ON THE STATISTICAL TABLES.

RELATIVE PRODUCING IMPORTANCE OF MINES.—In the columns showing the relative producing importance of various mines only those mines are considered from which returns were received and which produced bullion, or from which ore was sold and the assay values of such ores appear in the value of the production. Active mines which produced only ore which was not sold or treated in 1889 do not appear in this statement, neither do the figures include small and irregularly worked placer, Chinese, and other diggings not separately listed as mines, and from which no returns could be obtained.

ORE PRODUCED.—All ore reported produced in 1889, whether remaining on the dump at the end of the year or not, is included under this head. The returns of "ore produced" and "ore sold" were very imperfect, and the figures in the tables do not therefore represent the output or sales at all accurately.

ORE SOLD.—This includes no ore remaining on dump or reported as produced in 1889 and sold or treated in 1890, but only the ore reported as sold in 1889, whether mined in 1889 or in earlier years.

MOTIVE POWER.—The statistics of motive power include only such as were reported on schedules, and therefore do not represent the total amount of motive power actually used. As schedules were received from nearly all the mines that were important enough to require a steam boiler and engine, it is probable that the figures for boilers and engines are nearly correct, but no reliance whatever can be placed on the figures for water wheels, whims, windlasses, and other small motors.

APPROXIMATION OF LABOR, WAGES, AND OTHER EXPENDITURES AND VALUATIONS OF MINES FROM WHICH FULL STATISTICS COULD NOT BE OBTAINED.—In a great number of cases, especially of small mines and placers, it has been impossible to obtain actual figures of the number of men employed, the average number of days worked, the supplies or other expenditures, or the valuation of the mines and machinery. In such cases an approximate estimate of labor and wages has been made by taking these items for the mines from which returns could not be obtained, as bearing the same ratio to the bullion produced by such mines as they do for the mines from which statistics were obtained in the same county, and increasing the total figures of these items for the county by the percentage which the bullion from mines giving imperfect returns bears to the bullion produced by mines giving full returns. Thus, if the total bullion produced by the mines in a certain county which gave full statistics of labor, number of men employed, and wages paid is \$100,000, and there is \$10,000 worth of bullion produced by mines from which no statistics except the amount of bullion could be obtained, then the total figures of men employed, wages, etc., for those mines which produced the \$100,000 are increased by 10 per cent to make the total for the county. As

these mines are chiefly small placer mines and diggings, with little or no machinery, no estimate has been placed upon their valuation.

In the cases of the "undistributed gold" for several states, which could not be apportioned to the counties, and of the undistributed gold and silver in Montana, the same plan of estimating the labor, etc., for producing this undistributed gold and silver has been followed, using the total figures for the state as the basis upon which the percentage is calculated. In making these additions the average wages per day and the average number of days worked per year has been taken as the same as that calculated from the returns of mines in the county or state which gives full statistics, increasing the number of men by the percentage found as above described. This is as good a rule as could be adopted in making such estimates; but it is probable that the bullion produced by mines giving imperfect statistics cost the labor of a larger number of men, working shorter time and at lower wages, than a similar amount of bullion produced by mines returning full statistics, for the reason that fully organized mines, which return complete statistics, covering probably four-fifths of the total product, work steadily during the year and pay the highest rates of wages, but employ comparatively few men in proportion to the amount of bullion extracted, while the majority of the small mines and diggings are worked by their owners irregularly, sometimes for only a few days in the year, no actual wages being paid, and the product, which might be called the wages of the operator, amounting to less than the ordinary laborer's wages in the district. In this way a great number of men may be employed to produce a very small result.

In the Pacific states, which include Washington, Oregon, and California, a large amount of the gold product is obtained from irregular workings in ravines and gulches, beds of rivers, etc., of which no definite idea can be obtained as to the amount of wages received by the miners. As a usual thing the wages are just what they manage to get out of the ground. In such instances, for the purpose of this investigation, the wages are computed the same as the product, the rate per day being obtained by prorating the average number of men employed there during the year. The amount that is made in this way varies considerably, and ranges from 50 cents to \$4 per day.

In other instances a large portion of the labor is performed by owners of the mines. In such cases, if they worked alone, they were counted as laborers; if employing others, as foremen, the compensation in each instance was computed at the average for the same class in the same county.

COPPER AND LEAD PRODUCED BY MINES LISTED AS GOLD AND SILVER MINES, AND SILVER PRODUCED BY MINES WHOSE CHIEF PRODUCTION IS COPPER AND LEAD.—As many of the gold and silver mines produce also copper and lead, and many copper and lead mines produce gold and silver, it is impossible to exactly apportion the labor, wages, supplies, and other expenditures, and also the valuation of such mines, to the respective metals produced by them. The method adopted in the compilation of the statistics for approximately apportioning the labor and other costs and the valuation is as follows: In cases in which the mine as reported produced chiefly gold or silver, or both, the mine is taken as a precious metal mine, and its complete returns of labor, expenditures, valuation, etc., are taken as belonging entirely to its gold and silver production. In the case of lead and copper mines which produced small quantities of gold and silver, the amount of such gold and silver has been included with the county totals, and an apportionment of the labor, wages, and valuations has been made by taking the proportion which the gold and silver thus included bears to the rest of the bullion produced in the county and adding the percentage accordingly, assuming that the average wages and the average number of days worked in producing this added bullion were the same as the average for the county.

In this manner it is believed that as near an approximation as possible has been made of the amount of labor, wages, etc., expended in the production of gold and silver and of the value of the mines, machinery, etc., utilized in the production of these metals.

GOLD AND SILVER.

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STATISTICS OF GOLD AND SILVER MINES IN THE UNITED STATES IN 1889.

| STATES AND TERRITORIES. | Total value. | PRODUCTION. | | | | EMPLOYÉS ABOVE GROUND. | | | | | | | |
|-------------------------|--------------|--------------|--------------|--------------|----------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|
| | | Gold. | | Silver. | | Average number employed. | | | | Average wages per day. | | | |
| | | Fine ounces. | Value. | Fine ounces. | Coining value. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | \$99,283,732 | 1,590,869 | \$32,886,744 | 51,354,851 | \$66,396,988 | 1,585 | 3,273 | 17,085 | 82 | \$4.04 | \$3.67 | \$2.51 | \$1.16 |
| Alabama | 2,639 | 123 | 2,539 | 77 | 100 | 3 | 3 | 4 | ..... | 3.09 | 1.59 | 0.50 | ..... |
| Alaska | 916,568 | 43,762 | 904,650 | 9,219 | 11,918 | 16 | 21 | 153 | ..... | 5.59 | 5.09 | 2.82 | ..... |
| Arizona | 3,254,151 | 44,029 | 910,174 | 1,812,961 | 2,343,977 | 64 | 118 | 703 | 2 | 4.59 | 3.89 | 2.46 | 1.50 |
| California | 13,960,529 | 608,882 | 12,586,722 | 1,062,578 | 1,373,807 | 565 | 660 | 6,231 | 21 | 3.30 | 3.26 | 2.05 | 1.29 |
| Colorado | 27,641,610 | 187,881 | 3,883,859 | 18,375,551 | 23,757,751 | 330 | 781 | 1,505 | 16 | 4.23 | 3.80 | 2.91 | 1.70 |
| Georgia | 108,069 | 5,204 | 107,605 | 350 | 464 | 22 | 22 | 152 | ..... | 1.33 | 1.47 | 0.92 | ..... |
| Idaho | 6,040,641 | 95,983 | 1,984,159 | 3,137,508 | 4,056,482 | 128 | 354 | 964 | 2 | 4.64 | 4.04 | 3.04 | 1.25 |
| Maryland | 10,369 | 501 | 10,369 | ..... | ..... | 2 | ..... | 50 | ..... | 2.25 | ..... | 1.05 | ..... |
| Michigan | 105,925 | 4,210 | 87,040 | 14,607 | 18,885 | 2 | 7 | 32 | ..... | 3.25 | 2.25 | 1.81 | ..... |
| Montana | 20,608,287 | 151,861 | 3,139,327 | 13,511,455 | 17,468,900 | 96 | 307 | 2,613 | 5 | 5.39 | 4.14 | 3.25 | 1.40 |
| Nevada | 9,578,536 | 169,617 | 3,506,295 | 4,696,605 | 6,072,241 | 83 | 261 | 779 | 1 | 5.07 | 4.56 | 3.22 | 2.00 |
| New Mexico | 2,433,233 | 39,457 | 815,655 | 1,251,124 | 1,617,578 | 45 | 90 | 520 | 13 | 4.09 | 3.50 | 2.31 | 1.27 |
| North Carolina | 150,674 | 7,077 | 146,795 | 3,000 | 3,879 | 21 | 53 | 230 | 16 | 2.27 | 1.44 | 0.88 | 0.32 |
| Oregon | 987,691 | 46,648 | 964,309 | 17,851 | 23,382 | 59 | 132 | 1,490 | 3 | 3.32 | 2.92 | 2.29 | 0.83 |
| South Carolina | 47,085 | 2,266 | 46,853 | 179 | 232 | 7 | 13 | 114 | 1 | 3.02 | 2.54 | 0.99 | 0.50 |
| South Dakota | 3,226,463 | 149,533 | 3,091,137 | 104,672 | 135,331 | 31 | 260 | 554 | ..... | 4.57 | 3.23 | 2.85 | ..... |
| Texas | 425,001 | 330 | 6,828 | 323,438 | 418,173 | 7 | 10 | 36 | ..... | 4.62 | 2.83 | 2.07 | ..... |
| Utah | 9,544,680 | 23,591 | 487,666 | 7,005,193 | 9,057,014 | 85 | 171 | 475 | 2 | 5.27 | 3.93 | 3.14 | 1.09 |
| Virginia | 4,113 | 198 | 4,100 | 10 | 13 | 2 | ..... | 30 | ..... | 1.38 | ..... | 1.00 | ..... |
| Washington | 222,951 | 9,005 | 186,150 | 28,464 | 36,801 | 3 | 3 | 394 | ..... | 5.00 | 4.00 | 3.00 | ..... |
| Wyoming | 14,512 | 711 | 14,512 | ..... | ..... | 14 | 7 | 51 | ..... | 3.86 | 3.07 | 2.36 | ..... |

| STATES AND TERRITORIES. | EMPLOYÉS ABOVE GROUND—continued. | | | | EMPLOYÉS BELOW GROUND. | | | | | | | |
|-------------------------|--|------------|-----------|----------------------|--------------------------|---------|-----------|----------------------|------------------------|---------|-----------|----------------------|
| | Average number of days worked during year. | | | | Average number employed. | | | | Average wages per day. | | | |
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. |
| Total | 216 | 244 | 195 | 199 | 1,352 | 29,144 | 3,870 | 43 | \$4.16 | \$3.12 | \$2.46 | \$1.51 |
| Alabama | 155 | 210 | 150 | ..... | 1 | 7 | 6 | ..... | 3.00 | 1.25 | 0.83 | ..... |
| Alaska | 238 | 305 | 285 | ..... | 9 | 127 | 55 | ..... | 4.86 | 3.60 | 2.00 | ..... |
| Arizona | 219 | 187 | 205 | 145 | 34 | 1,467 | 132 | 1 | 4.44 | 3.17 | 2.24 | 1.50 |
| California | 182 | 196 | 147 | 129 | 303 | 5,522 | 944 | 8 | 3.49 | 2.74 | 2.26 | 1.50 |
| Colorado | 234 | 254 | 237 | 212 | 396 | 9,585 | 569 | 14 | 4.22 | 3.08 | 2.88 | 1.09 |
| Georgia | 173 | 250 | 228 | ..... | 17 | 41 | 93 | ..... | 1.60 | 1.05 | 0.80 | ..... |
| Idaho | 211 | 203 | 187 | 285 | 163 | 2,566 | 318 | ..... | 4.79 | 3.59 | 3.10 | ..... |
| Maryland | 249 | ..... | 257 | ..... | ..... | 2 | 10 | ..... | ..... | 1.50 | 1.25 | ..... |
| Michigan | 312 | 350 | 319 | ..... | 1 | 40 | 13 | ..... | 2.25 | 2.00 | 1.80 | ..... |
| Montana | 286 | 296 | 287 | 300 | 65 | 2,552 | 254 | 5 | 5.11 | 3.48 | 3.13 | 1.75 |
| Nevada | 304 | 298 | 270 | 365 | 84 | 2,003 | 214 | 1 | 4.83 | 3.60 | 2.91 | 1.50 |
| New Mexico | 169 | 193 | 204 | 166 | 48 | 1,202 | 154 | 12 | 4.15 | 3.15 | 2.26 | 1.21 |
| North Carolina | 242 | 193 | 179 | 243 | 18 | 238 | 178 | ..... | 2.26 | 1.02 | 0.85 | ..... |
| Oregon | 140 | 199 | 130 | 240 | 22 | 653 | 57 | 1 | 3.92 | 3.16 | 2.23 | 1.50 |
| South Carolina | 63 | 113 | 92 | 26 | 2 | 34 | 20 | ..... | 3.10 | 1.15 | 0.90 | ..... |
| South Dakota | 272 | 311 | 204 | ..... | 31 | 645 | 369 | ..... | 4.75 | 3.49 | 2.99 | ..... |
| Texas | 130 | 174 | 147 | ..... | 5 | 78 | 192 | ..... | 2.60 | 1.27 | 1.25 | ..... |
| Utah | 307 | 319 | 311 | 365 | 132 | 2,065 | 274 | 1 | 4.21 | 3.04 | 2.80 | 1.50 |
| Virginia | 50 | ..... | 70 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Washington | 221 | 280 | 139 | ..... | 8 | 187 | 7 | ..... | 4.69 | 3.43 | 3.28 | ..... |
| Wyoming | 105 | 56 | 81 | ..... | 13 | 130 | 11 | ..... | 4.84 | 3.05 | 2.36 | ..... |

MINERAL INDUSTRIES IN THE UNITED STATES.

STATISTICS OF GOLD AND SILVER MINES IN THE UNITED STATES IN 1889—Continued.

| STATES AND TERRITORIES. | EMPLOYÉS BELOW GROUND—cont'd. | | | | Total number of mines. | Total producing mines reported. | NUMBER OF MINES PRODUCING— | | | | | | | NONPRODUCTIVE MINES. | |
|-------------------------|--|---------|-----------|----------------------|------------------------|---------------------------------|----------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------------------|-----------------|-----------------------------------|-----------------------|
| | Average number of days worked during year. | | | | | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. | Over \$500,000. | Mines working but non-productive. | Number of mines idle. |
| | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | | | | | | | | | | | |
| Total | 238 | 236 | 244 | 208 | 6,004 | 3,729 | 1,610 | 1,408 | 437 | 95 | 107 | 44 | 28 | 1,009 | 1,260 |
| Alabama | 210 | 165 | 137 | ..... | 3 | 3 | 2 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Alaska | 360 | 300 | 282 | ..... | 12 | 5 | 2 | 1 | 1 | ..... | ..... | ..... | 1 | 7 | ..... |
| Arizona | 193 | 215 | 199 | 89 | 192 | 154 | 26 | 82 | 34 | 7 | 4 | 1 | ..... | 14 | 24 |
| California | 217 | 209 | 237 | 103 | 2,169 | 1,359 | 627 | 583 | 102 | 18 | 21 | 6 | 2 | 244 | 506 |
| Colorado | 226 | 241 | 244 | 257 | 1,871 | 988 | 426 | 331 | 134 | 27 | 44 | 19 | 7 | 418 | 465 |
| Georgia | 148 | 179 | 212 | ..... | 18 | 15 | 5 | 7 | 3 | ..... | ..... | ..... | ..... | 3 | ..... |
| Idaho | 247 | 204 | 206 | ..... | 536 | 421 | 209 | 147 | 42 | 12 | 8 | 3 | ..... | 69 | 46 |
| Maryland ..... | ..... | 250 | 260 | ..... | 2 | 2 | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Michigan | 310 | 310 | 310 | ..... | 3 | 2 | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 1 | ..... |
| Montana | 303 | 295 | 292 | 324 | 114 | 75 | 13 | 21 | 13 | 3 | 9 | 8 | 8 | 26 | 13 |
| Nevada | 312 | 289 | 248 | 30 | 245 | 171 | 47 | 69 | 29 | 12 | 9 | 2 | 3 | 44 | 30 |
| New Mexico | 233 | 214 | 228 | 211 | 250 | 129 | 28 | 56 | 34 | 7 | 3 | 1 | ..... | 57 | 64 |
| North Carolina | 197 | 155 | 205 | ..... | 24 | 17 | 4 | 9 | 4 | ..... | ..... | ..... | ..... | 7 | ..... |
| Oregon | 104 | 157 | 200 | 40 | 285 | 200 | 122 | 63 | 13 | 2 | ..... | ..... | ..... | 30 | 55 |
| South Carolina | 73 | 70 | 24 | ..... | 4 | 2 | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 2 | ..... |
| South Dakota | 299 | 293 | 321 | ..... | 48 | 31 | 12 | 6 | 6 | 3 | ..... | 1 | 3 | 8 | 9 |
| Texas | 163 | 175 | 156 | ..... | 10 | 5 | 2 | ..... | ..... | 1 | 2 | ..... | ..... | 1 | 4 |
| Utah | 279 | 273 | 316 | 200 | 129 | 66 | 9 | 21 | 19 | 3 | 7 | 3 | 4 | 26 | 37 |
| Virginia ..... | ..... | ..... | ..... | ..... | 7 | 3 | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 4 | ..... |
| Washington | 124 | 134 | 154 | ..... | 86 | 70 | 65 | 4 | 1 | ..... | ..... | ..... | ..... | 7 | 9 |
| Wyoming | 80 | 58 | 108 | ..... | 56 | 11 | 7 | 4 | ..... | ..... | ..... | ..... | ..... | 41 | 4 |

| STATES AND TERRITORIES. | EXPENDITURES. | | | | | | | | VALUE OF MINING PROPERTY. | | | | |
|-------------------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|----------|-------------|---------------------------|---------------------|-----------------------|---------------------|--------------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of railroads on surface. |
| | | | | | Males. | | Females. | | | | | | |
| | | | | | Number. | Wages paid. | Number. | Wages paid. | | | | | |
| Total | \$63,451,130 | \$43,180,696 | \$40,412,022 | \$1,421,301 | 848 | \$1,335,189 | 25 | \$12,184 | \$13,817,739 | \$6,452,701 | \$465,960,566 | \$7,565,918 | \$1,475,674 |
| Alabama | 8,042 | 7,588 | 6,363 | ..... | ..... | 1,225 | ..... | ..... | 335 | 119 | 35,000 | 1,400 | 1,050 |
| Alaska | 618,009 | 315,498 | 304,731 | ..... | 4 | 10,767 | ..... | ..... | 301,236 | 1,275 | 4,239,955 | 41,778 | 16,633 |
| Arizona | 2,058,039 | 1,599,259 | 1,499,641 | 48,902 | 30 | 50,716 | ..... | ..... | 348,662 | 110,118 | 19,734,884 | 207,264 | 17,800 |
| California | 12,506,555 | 9,689,265 | 9,191,500 | 296,373 | 160 | 199,955 | 4 | 1,437 | 2,151,229 | 660,061 | 67,641,986 | 1,662,014 | 238,467 |
| Colorado | 13,834,332 | 10,114,682 | 9,339,875 | 400,772 | 219 | 368,639 | 7 | 5,396 | 2,559,705 | 1,159,945 | 137,881,531 | 1,235,853 | 137,582 |
| Georgia | 141,474 | 90,474 | 77,070 | 958 | 16 | 12,446 | ..... | ..... | 18,634 | 32,366 | 1,504,758 | 12,815 | 9,420 |
| Idaho | 4,870,484 | 3,686,362 | 3,331,151 | 164,257 | 104 | 160,261 | 9 | 693 | 889,958 | 294,164 | 44,194,594 | 1,012,677 | 283,183 |
| Maryland | 18,001 | 13,800 | 12,800 | ..... | 1 | 1,000 | ..... | ..... | 2,632 | 1,569 | 370,000 | 1,000 | 685 |
| Michigan | 99,183 | 56,198 | 45,096 | 10,447 | 2 | 655 | ..... | ..... | 9,152 | 33,833 | 676,212 | 11,600 | 87,406 |
| Montana | 9,259,657 | 6,123,132 | 5,881,500 | 120,507 | 52 | 120,815 | 1 | 250 | 2,399,963 | 736,562 | 53,256,396 | 494,619 | 312,150 |
| Nevada | 8,254,755 | 3,764,256 | 3,522,280 | 36,011 | 119 | 203,385 | 1 | 2,560 | 2,329,607 | 2,160,892 | 25,049,695 | 476,331 | 160,324 |
| New Mexico | 1,730,126 | 1,333,402 | 1,226,857 | 55,383 | 30 | 49,454 | 2 | 1,768 | 270,706 | 125,958 | 18,268,499 | 256,349 | 15,000 |
| North Carolina | 285,795 | 195,614 | 153,439 | 13,945 | 27 | 28,230 | ..... | ..... | 64,731 | 25,450 | 2,173,993 | 58,540 | 6,603 |
| Oregon | 1,604,781 | 970,758 | 909,001 | 13,907 | 28 | 47,850 | ..... | ..... | 549,745 | 84,278 | 15,151,203 | 684,004 | 28,626 |
| South Carolina | 79,098 | 37,078 | 33,078 | ..... | 2 | 4,000 | ..... | ..... | 11,052 | 30,968 | 1,148,050 | 15,125 | 12,000 |
| South Dakota | 2,589,363 | 1,742,042 | 1,605,738 | 120,169 | 9 | 16,135 | ..... | ..... | 721,139 | 126,202 | 5,271,110 | 124,775 | 8,087 |
| Texas | 203,808 | 82,586 | 70,146 | 276 | 5 | 6,170 | ..... | ..... | 17,602 | 105,620 | 405,292 | 7,900 | ..... |
| Utah | 4,875,211 | 3,022,648 | 2,869,852 | 105,535 | 33 | 47,261 | ..... | ..... | 1,111,963 | 740,600 | 63,009,466 | 1,229,109 | 138,378 |
| Virginia | 2,875 | 2,400 | 2,100 | ..... | 1 | 300 | ..... | ..... | 175 | 300 | 50,000 | 2,500 | ..... |
| Washington | 328,816 | 282,759 | 277,859 | 2,500 | 1 | 2,400 | ..... | ..... | 35,320 | 10,737 | 3,536,925 | 10,520 | 590 |
| Wyoming | 80,712 | 50,835 | 45,945 | 1,305 | 5 | 3,525 | 1 | 60 | 24,193 | 5,684 | 2,361,017 | 19,745 | 1,600 |

GOLD AND SILVER.

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STATISTICS OF GOLD AND SILVER MINES IN THE UNITED STATES IN 1889—Continued.

| STATES AND TERRITORIES. | VALUE OF MINING PROPERTY—continued. | | | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | |
|-------------------------|-------------------------------------|----------------------------|----------------|---------------|-------------|-----------------------------------|-------------|--------------|-------------|---------------|--------------|----------|--------------|
| | Machinery. | Under-ground improvements. | Mine supplies. | Mine proper. | Cash. | Total. | Buildings. | Machinery. | Supplies. | Boilers. | | Engines. | |
| | | | | | | | | | | Number. | Horse power. | Number. | Horse power. |
| Total | \$14,985,215 | \$95,806,648 | \$3,910,480 | \$338,094,821 | \$4,112,810 | \$20,362,772 | \$5,685,562 | \$13,456,938 | \$1,220,272 | 2,034 | 78,343 | 1,364 | 55,122 |
| Alabama | 20,465 | 4,353 | 287 | 6,395 | 1,050 | 8,456 | 700 | 6,650 | 1,100 | 1 | 14 | 1 | ..... |
| Alaska | 148,067 | 155,343 | 83,000 | 3,778,467 | 16,067 | 556,307 | 53,788 | 465,719 | 36,899 | 2 | 360 | 2 | 300 |
| Arizona | 469,497 | 1,906,560 | 103,370 | 17,018,293 | 10,100 | 828,495 | 198,069 | 585,835 | 44,600 | 83 | 2,563 | 60 | 1,030 |
| California | 4,330,986 | 12,305,794 | 585,431 | 48,248,811 | 270,483 | 3,792,982 | 976,241 | 2,633,256 | 132,835 | 293 | 9,813 | 266 | 8,633 |
| Colorado | 2,961,167 | 26,316,640 | 719,062 | 105,708,422 | 802,825 | 2,432,244 | 690,719 | 1,699,165 | 42,360 | 622 | 23,929 | 502 | 13,972 |
| Georgia | 37,964 | 96,896 | 8,007 | 1,337,376 | 2,280 | 219,411 | 32,540 | 185,222 | 1,649 | 9 | 369 | 7 | 233 |
| Idaho | 928,439 | 8,205,875 | 415,634 | 33,154,216 | 104,570 | 2,540,888 | 760,118 | 1,590,888 | 180,832 | 225 | 5,559 | 80 | 2,296 |
| Maryland | 1,965 | 16,825 | 750 | 348,775 | ..... | 5,175 | 1,500 | 3,675 | ..... | 2 | 100 | 1 | ..... |
| Michigan | 114,007 | 19,100 | 18,690 | 415,000 | 10,409 | ..... | ..... | ..... | ..... | 5 | 270 | 7 | 529 |
| Montana | 1,642,241 | 11,352,908 | 546,605 | 38,646,253 | 261,620 | 3,314,677 | 1,179,919 | 1,861,946 | 272,712 | 145 | 8,266 | 86 | 4,239 |
| Nevada | 1,278,072 | 7,445,625 | 348,854 | 15,202,039 | 138,250 | 1,818,176 | 458,881 | 1,187,352 | 171,943 | 189 | 9,283 | 139 | 11,048 |
| New Mexico | 881,045 | 2,413,506 | 312,822 | 14,273,655 | 116,122 | 1,079,910 | 201,540 | 829,150 | 49,220 | 100 | 3,773 | 62 | 1,912 |
| North Carolina | 168,325 | 404,328 | 8,652 | 1,494,026 | 33,519 | 301,414 | 52,334 | 244,271 | 4,809 | 89 | 4,113 | 47 | 2,415 |
| Oregon | 486,408 | 1,524,368 | 93,116 | 12,198,130 | 136,556 | 1,145,006 | 447,993 | 650,188 | 46,825 | 26 | 811 | 16 | 1,796 |
| South Carolina | 18,125 | 67,000 | 4,500 | 1,031,300 | ..... | 78,725 | 9,000 | 68,225 | 1,509 | 12 | 595 | 4 | 210 |
| South Dakota | 336,923 | 693,888 | 37,462 | 4,140,827 | 19,148 | 573,774 | 155,402 | 389,068 | 29,304 | 66 | 3,427 | 41 | 2,969 |
| Texas | 9,200 | 25,000 | 4,192 | 357,000 | 2,000 | 40,560 | 10,000 | 20,000 | 19,560 | 2 | 20 | 2 | 66 |
| Utah | 1,013,509 | 22,111,817 | 605,271 | 35,726,352 | 2,185,030 | 1,445,047 | 408,752 | 857,228 | 179,067 | 139 | 4,525 | 24 | 2,829 |
| Virginia | 2,500 | 5,000 | 2,000 | 38,000 | ..... | 7,500 | 2,000 | 5,000 | 500 | 4 | 145 | 3 | 125 |
| Washington | 14,765 | 399,840 | 6,260 | 3,103,040 | 2,000 | 34,550 | 18,650 | 11,900 | 4,000 | 2 | 30 | 2 | 21 |
| Wyoming | 121,550 | 335,982 | 13,515 | 1,868,444 | 181 | 130,375 | 27,425 | 102,600 | 550 | 8 | 378 | 12 | 449 |

| STATES AND TERRITORIES. | MOTIVE POWER—cont'd. | | | Number of animals. | Total value of bullion. | Total capital invested. | Amount of capital per dollar of bullion produced. | Amount of bullion produced per dollar of capital. | Total expenditures. | Value of bullion per dollar of expense. | Amount of expense per dollar of bullion. | Net percentage of apparent profit or loss(—) on total capital. | Average assay value per ton of ore sold. | Average bullion value per ton of ore treated. |
|-------------------------|----------------------|---------|--------------|--------------------|-------------------------|-------------------------|---|---|---------------------|---|--|--|--|---|
| | Other power. | Motors. | | | | | | | | | | | | |
| | | Number. | Horse power. | | | | | | | | | | | |
| Total ..... | ..... | 623 | 18,821 | 3,965 | \$99,283,732 | \$486,323,338 | \$4.90 | \$0.20 | \$63,451,136 | \$1.56 | \$0.64 | 7.37 | \$45.88 | \$13.30 |
| Alabama..... | ..... | ..... | ..... | 3 | 2,639 | 43,456 | 16.47 | 0.06 | 8,042 | 0.33 | 3.05 | —15.43 | ..... | ..... |
| Alaska..... | ..... | ..... | ..... | ..... | 916,568 | 4,796,262 | 5.23 | 0.19 | 618,009 | 1.48 | 0.67 | 6.22 | ..... | ..... |
| Arizona..... | (a) | 2 | 40 | 354 | 3,254,151 | 20,563,379 | 6.22 | 0.16 | 2,058,039 | 1.58 | 0.63 | 5.82 | 113.77 | 34.26 |
| California..... | (b) | 370 | 12,063 | 1,007 | 13,960,529 | 71,434,968 | 5.12 | 0.20 | 12,506,555 | 1.12 | 0.90 | 2.04 | 74.79 | 7.90 |
| Colorado..... | (c) | 34 | 1,253 | 1,109 | 27,641,610 | 140,313,775 | 5.08 | 0.20 | 13,834,332 | 2.00 | 0.50 | 9.84 | 42.86 | 8.95 |
| Georgia..... | (d) | 25 | 20 | 9 | 108,069 | 1,724,169 | 15.95 | 0.08 | 141,474 | 0.76 | 1.31 | —1.84 | ..... | ..... |
| Idaho..... | (e) | 67 | 3,274 | 273 | 6,040,641 | 46,735,482 | 7.74 | 0.13 | 4,870,484 | 1.24 | 0.81 | 2.50 | ..... | ..... |
| Maryland..... | ..... | ..... | ..... | 3 | 10,369 | 375,175 | 36.18 | 0.03 | 18,001 | 0.58 | 1.74 | —2.03 | ..... | ..... |
| Michigan..... | (d) | ..... | ..... | 6 | 105,925 | 676,212 | 6.38 | 0.16 | 99,183 | 1.07 | 0.94 | 1.00 | ..... | 3.32 |
| Montana..... | (f) | 5 | 158 | 265 | 20,608,287 | 56,570,973 | 2.75 | 0.36 | 9,259,657 | 2.23 | 0.45 | 20.06 | 39.98 | 42.31 |
| Nevada..... | (g) | 34 | 705 | 233 | 9,578,536 | 26,867,871 | 2.81 | 0.36 | 8,254,755 | 1.16 | 0.86 | 4.93 | 128.34 | 21.76 |
| New Mexico..... | (h) | ..... | ..... | 290 | 2,433,233 | 19,348,409 | 7.95 | 0.13 | 1,730,126 | 1.41 | 0.71 | 3.63 | 35.21 | 15.98 |
| North Carolina..... | ..... | 14 | 399 | 42 | 150,674 | 2,475,407 | 16.43 | 0.06 | 235,795 | 0.53 | 1.90 | —5.46 | ..... | ..... |
| Oregon..... | (i) | 34 | 339 | 126 | 987,691 | 16,296,209 | 16.50 | 0.06 | 1,604,781 | 0.62 | 1.62 | —3.79 | 88.19 | 11.29 |
| South Carolina..... | ..... | ..... | ..... | 7 | 47,085 | 1,226,775 | 26.05 | 0.04 | 79,096 | 0.60 | 1.68 | —2.61 | ..... | ..... |
| South Dakota..... | (d) | ..... | ..... | 71 | 3,226,468 | 5,844,884 | 1.81 | 0.55 | 2,589,383 | 1.25 | 0.80 | 10.90 | 47.79 | 3.01 |
| Texas..... | (j) | 6 | ..... | 31 | 425,001 | 454,852 | 1.07 | 0.93 | 205,808 | 2.07 | 0.48 | 48.19 | 69.40 | 32.14 |
| Utah..... | (k) | 13 | 419 | 166 | 9,544,680 | 64,454,513 | 6.75 | 0.15 | 4,875,211 | 1.96 | 0.51 | 7.24 | 54.22 | 34.67 |
| Virginia..... | ..... | ..... | ..... | 2 | 4,113 | 57,500 | 13.98 | 0.07 | 2,875 | 1.43 | 0.70 | 2.15 | ..... | ..... |
| Washington..... | (l) | 12 | 81 | 19 | 222,951 | 3,571,475 | 16.02 | 0.06 | 328,816 | 0.68 | 1.47 | —2.96 | 707.17 | 13.48 |
| Wyoming..... | (m) | 7 | 70 | 39 | 14,512 | 2,491,592 | 171.69 | 0.01 | 80,712 | 0.18 | 5.56 | —2.66 | ..... | 14.99 |

a Windlasses and whims, 49.
b Water windlasses, etc., 439.
c Water, etc., 266.

d Water.
e Water windlasses, etc.
f Water whims, etc., 18.

g Water whims, etc., 50.
h Whims, windlasses.
i Water, etc., 40.

j Windlass.
k Whims, etc.

l Water windlass and whims.
m Waterwheels, whims, and windlass.

STATISTICS OF GOLD AND SILVER IN THE STATES OF THE APPALACHIAN RANGE.

| STATES. | Ore produced. (Tons.) | Ore sold or treated. (Tons.) | BULLION PRODUCED FROM ORE SOLD OR TREATED IN 1889. | | EMPLOYÉS ABOVE GROUND. | | | | | | | | | | | |
|---|--------------------------|---------------------------------------|--|---------------------|------------------------------------|----------------------|----------------|-------------------------------|------------------------------------|----------------------|----------------|-------------------------------|---|----------------------|----------------|-------------------------------|
| | | | | | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | | | Gold. (Value.) | Silver. (Value.) | Fore- men or over- seers. | Me- chan- ics. | Labor- ers. | Boys under 16 years. | Fore- men or over- seers. | Me- chan- ics. | Labor- ers. | Boys under 16 years. | Fore- men or over- seers. | Me- chan- ics. | Labor- ers. | Boys under 16 years. |
| ALABAMA. | | | | | | | | | | | | | | | | |
| Clay, Cleburne, and Talla- poosa counties, and un- distributed petty mining. | 470 | 470 | \$2,539 | \$100 | 3 | 3 | 4 | | \$3.00 | \$1.50 | \$0.90 | | 155 | 210 | 150 | |
| GEORGIA..... | 90,694 | 78,134 | 107,605 | 464 | 22 | 22 | 152 | | 1.33 | 1.47 | 0.92 | | 173 | 250 | 228 | |
| Cherokee, Haralson, and McDuffie counties. | 2,817 | 2,817 | 18,160 | 5 | 1 | 11 | 25 | | 1.33 | 1.50 | 1.05 | | 160 | 276 | 230 | |
| Lumpkin county..... | 42,450 | 34,450 | 27,332 | 282 | 9 | 3 | 35 | | 1.30 | 1.38 | 0.90 | | 117 | 154 | 143 | |
| White county..... | 12,500 | 12,500 | 23,318 | | 4 | | 37 | | 1.40 | | 0.86 | | 303 | | 300 | |
| Undistributed petty mining | 32,927 | 28,367 | 38,995 | 177 | 8 | 8 | 55 | | | | | | | | | |
| MARYLAND. | | | | | | | | | | | | | | | | |
| Montgomery county..... | 1,150 | 1,150 | 10,369 | | 2 | | 50 | | 2.25 | | 1.05 | | 249 | | 257 | |
| NORTH CAROLINA..... | 20,581 | 18,821 | 146,795 | 3,879 | 21 | 53 | 230 | 16 | 2.27 | 1.44 | 0.88 | \$0.32 | 242 | 193 | 179 | 243 |
| Cabarrus county..... | 1,200 | | 15,500 | | 1 | 1 | 8 | | 2.80 | 1.35 | 0.90 | | 312 | 240 | 288 | |
| Mecklenburg county..... | 520 | 60 | 1,533 | 20 | 2 | 5 | 13 | | 2.40 | 1.25 | 0.94 | | 188 | 192 | 110 | |
| Montgomery county..... | 8,054 | 7,954 | 24,518 | 406 | 4 | 10 | 32 | | 1.75 | 1.62 | 0.91 | | 300 | 152 | 213 | |
| Clay, Cleveland, Franklin, Moore, Randolph, Rowan, Stanly, and Union coun- ties. | 9,807 | 9,807 | 58,953 | 962 | 7 | 21 | 102 | 12 | 2.49 | 1.39 | 0.86 | 0.32 | 236 | 220 | 171 | 243 |
| Davidson, Guilford, and Henderson counties. | 1,000 | 1,000 | 733 | | 1 | 2 | 13 | | 2.00 | 1.50 | 0.85 | | 90 | 100 | 156 | |
| Undistributed petty mining | | | 45,558 | 2,491 | 6 | 14 | 62 | 4 | | | | | | | | |
| SOUTH CAROLINA..... | 10,250 | 10,250 | 46,853 | 232 | 7 | 13 | 114 | 1 | 3.02 | 2.54 | 0.99 | 0.50 | 65 | 113 | 92 | 26 |
| Chesterfield, Lancaster, Pickens, Union, and York counties. | 10,250 | 10,250 | 42,273 | | 7 | 13 | 64 | 1 | 3.02 | 2.54 | 0.99 | 0.50 | 65 | 113 | 92 | 26 |
| Undistributed petty mining | | | 4,580 | 232 | | | 50 | | | | | | | | | |
| VIRGINIA. | | | | | | | | | | | | | | | | |
| Buckingham, Culpeper, Fluvanna, Orange, and Stafford counties, and un- distributed petty mining. | 600 | 600 | 4,100 | 13 | 2 | | 33 | | 1.38 | | 1.00 | | 50 | | 70 | |

STATISTICS OF GOLD AND SILVER IN THE STATES OF THE APPALACHIAN RANGE—Continued.

[illegible]

MINERAL INDUSTRIES IN THE UNITED STATES.

STATISTICS OF GOLD AND SILVER IN THE STATES OF THE APPALACHIAN RANGE—Continued.

| STATES. | Total pro- ducing mines re- ported. | NUMBER OF MINES PRO- DUCING— | | | | Mines working but non- produc- tive. | EXPENDITURES. | | | | | | | |
|---|--|---------------------------------|----------------------------|-----------------------------|--------------------------------------|--|--------------------------|---------------------------------|------------------------------|---------------|----------------|----------|----------------|--|
| | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | Grand total of expendi- tures. | | Grand total of wages. | Total wages paid in 1889. | Paid to con- tractors. | Office force. | | | | |
| | | | | | | | | | | Males. | | Females. | | |
| | | | | | | | | | | Number. | Wages paid. | Number. | Wages paid. | |
| ALABAMA. | | | | | | | | | | | | | | |
| Clay, Cleburne, and Talla- poosa counties, and un- distributed petty mining. | 3 | 2 | 1 | | | \$8,042 | \$7,588 | \$6,363 | | | \$1,225 | | | |
| GEORGIA. | 15 | 5 | 7 | 3 | 3 | 141,474 | 90,474 | 77,070 | \$958 | 16 | 12,446 | | | |
| Cherokee, Haralson, and McDuffie counties. | 3 | 1 | 1 | 1 | | 49,680 | 26,129 | 22,001 | | 6 | 4,128 | | | |
| Lumpkin county. | 9 | 4 | 4 | 1 | 2 | 20,241 | 14,218 | 12,408 | 310 | 1 | 1,500 | | | |
| White county. | 3 | | 2 | 1 | 1 | 20,190 | 17,280 | 14,680 | 300 | 3 | 2,300 | | | |
| Undistributed petty mining | | | | | | 51,363 | 32,847 | 27,981 | 348 | 6 | 4,518 | | | |
| MARYLAND. | | | | | | | | | | | | | | |
| Montgomery county | 2 | 1 | 1 | | | 18,001 | 13,800 | 12,800 | | 1 | 1,000 | | | |
| NORTH CAROLINA. | 17 | 4 | 9 | 4 | 7 | 285,795 | 195,614 | 153,439 | 13,945 | 27 | 23,230 | | | |
| Cabarrus county | 2 | 1 | | 1 | | 13,950 | 8,000 | 8,000 | | | | | | |
| Mecklenburg county | 3 | 2 | 1 | | | 21,385 | 14,116 | 11,766 | | 3 | 2,350 | | | |
| Montgomery county | 4 | | 3 | 1 | | 66,267 | 44,523 | 26,745 | 6,923 | 6 | 10,855 | | | |
| Clay, Cleveland, Franklin, Moore, Randolph, Rowan, Stanly, and Union coun- ties. | 8 | 1 | 5 | 2 | 3 | 102,662 | 72,365 | 64,208 | 3,256 | 9 | 4,901 | | | |
| Davidson, Guilford, and Henderson counties. | | | | | 4 | 4,346 | 3,780 | 1,280 | | 2 | 2,500 | | | |
| Undistributed petty mining | | | | | | 77,185 | 52,830 | 41,440 | 3,766 | 7 | 7,624 | | | |
| SOUTH CAROLINA | 2 | | 1 | 1 | 2 | 79,098 | 37,078 | 33,078 | | 2 | 4,000 | | | |
| Chesterfield, Lancaster, Pickens, Union, and York counties. | 1 | | | 1 | 2 | 74,348 | 32,524 | 28,524 | | 2 | 4,000 | | | |
| Undistributed petty mining | 1 | | 1 | | | 4,750 | 4,554 | 4,554 | | | | | | |
| VIRGINIA. | | | | | | | | | | | | | | |
| Buckingham, Calpeper, Fluvanna, Orange, and Stafford counties, and un- distributed petty mining. | 3 | 3 | | | 4 | 2,875 | 2,400 | 2,100 | | 1 | 300 | | | |

STATISTICS OF GOLD AND SILVER IN THE STATES OF THE APPALACHIAN RANGE—Continued.

| STATES. | EXPENDITURES—continued | | VALUE OF MINING PROPERTY. | | | | | | | |
|---|------------------------|---------------------|---------------------------|---------------------|------------------------------------|-------------|-----------------------------|-----------------|--------------|---------|
| | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of of rail-roads on surface. | Ma-chinery. | Under-ground improve-ments. | Mine sup-plies. | Mine proper. | Cash. |
| ALABAMA. | | | | | | | | | | |
| Clay, Cleburne, and Talla- poosa counties, and un- distributed petty mining. | \$335 | \$119 | \$35,000 | \$1,400 | \$1,050 | \$20,465 | \$4,353 | \$287 | \$6,395 | \$1,050 |
| GEORGIA..... | 18,634 | 32,368 | 1,504,758 | 12,815 | 9,420 | 37,904 | 96,896 | 8,007 | 1,337,376 | 2,280 |
| Cherokee, Haralson, and McDuffie counties. | 4,279 | 19,272 | 210,951 | 5,119 | 1,000 | 14,831 | 59,217 | 5,000 | 124,332 | 1,452 |
| Lumpkin county | 5,090 | 933 | 307,500 | 2,100 | ..... | 9,350 | 2,500 | 100 | 293,450 | ..... |
| White county..... | 2,500 | 410 | 440,000 | 950 | 5,000 | ..... | ..... | ..... | 434,050 | ..... |
| Undistributed petty mining | 6,765 | 11,751 | 546,307 | 4,646 | 3,420 | 13,783 | 35,179 | 2,907 | 485,544 | 828 |
| MARYLAND. | | | | | | | | | | |
| Montgomery county | 2,632 | 1,569 | 370,000 | 1,000 | 685 | 1,965 | 16,825 | 750 | 348,775 | ..... |
| NORTH CAROLINA | 64,731 | 25,450 | 2,173,993 | 58,540 | 6,603 | 168,325 | 404,328 | 8,052 | 1,494,026 | 33,519 |
| Cabarrus county..... | 4,000 | 1,950 | 17,000 | 5,000 | ..... | 2,000 | ..... | ..... | 10,000 | ..... |
| Mecklenburg county..... | 5,562 | 1,707 | 132,800 | 1,875 | 540 | 8,700 | 55,400 | 400 | 65,285 | 600 |
| Montgomery county | 11,426 | 10,318 | 330,390 | 11,555 | 1,480 | 51,749 | 64,830 | 2,365 | 198,420 | ..... |
| Clay, Cleveland, Franklin, Moore, Randolph, Rowan, Stanly, and Union coun- ties. | 25,841 | 4,456 | 861,666 | 15,300 | 2,500 | 38,825 | 132,400 | 3,200 | 645,575 | 23,866 |
| Davidson, Guilford, and Henderson counties. | 420 | 146 | 245,000 | 9,000 | 300 | 21,600 | 42,500 | 350 | 171,250 | ..... |
| Undistributed petty mining | 17,482 | 6,873 | 567,137 | 15,810 | 1,783 | 45,400 | 109,198 | 2,337 | 403,496 | 9,053 |
| SOUTH CAROLINA | 11,052 | 30,968 | 1,148,050 | 15,125 | 12,000 | 18,125 | 67,000 | 4,500 | 1,031,300 | ..... |
| Chesterfield, Lancaster, Pickens, Union, and York counties. | 10,856 | 30,968 | 1,148,050 | 15,125 | 12,000 | 18,125 | 67,000 | 4,500 | 1,031,300 | ..... |
| Undistributed petty mining | 196 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| VIRGINIA. | | | | | | | | | | |
| Buckingham, Culpeper, Fluvanna, Orange, and Stafford counties, and un- distributed petty mining. | 175 | 300 | 50,000 | 2,500 | ..... | 2,500 | 5,000 | 2,000 | 38,000 | ..... |

STATISTICS OF GOLD AND SILVER IN THE STATES OF THE APPALACHIAN RANGE—Continued.

| STATES. | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | Number of animals. |
|--|-----------------------------------|------------|------------|-----------|---------------|-----------------|----------|-----------------|--------------|---------|-----------------|--------------------------|
| | Total. | Buildings. | Machinery. | Supplies. | Boilers. | | Engines. | | Other power. | Motors. | | |
| | | | | | Number. | Horse power. | Number. | Horse power. | | Number. | Horse power. | |
| ALABAMA. | | | | | | | | | | | | |
| Clay, Cleburne, and Tallapoosa counties, and undistributed petty mining. | \$8,456 | \$700 | \$6,650 | \$1,106 | 1 | 14 | 1 | | | | | 3 |
| GEORGIA | 219,411 | 32,540 | 185,222 | 1,649 | 9 | 369 | 7 | 283 | | 25 | 20 | 9 |
| Cherokee, Haralson, and McDuffie counties. | 48,152 | 15,876 | 31,770 | 500 | 4 | 155 | 5 | 100 | Water | 2 | 20 | 9 |
| Lumpkin county..... | 78,600 | 3,950 | 74,200 | 450 | 2 | 80 | 2 | 80 | Water | 14 | | |
| White county | 13,000 | 900 | 12,000 | 100 | | | | | | | | |
| Undistributed petty mining | 79,659 | 11,814 | 67,246 | 599 | 3 | 134 | | 103 | | 9 | | |
| MARYLAND. | | | | | | | | | | | | |
| Montgomery county | 5,175 | 1,500 | 3,675 | | 2 | 100 | 1 | | | | | 3 |
| NORTH CAROLINA | 301,414 | 52,334 | 244,271 | 4,809 | 89 | 4,113 | 47 | 2,415 | | 14 | 399 | 42 |
| Cabarrus county | 3,000 | | 3,000 | | 3 | 140 | | | | | | |
| Mecklenburg county..... | 11,800 | 300 | 11,250 | 250 | 7 | 202 | 5 | 190 | | | | |
| Montgomery county | 68,260 | 12,200 | 55,400 | 660 | 18 | 918 | 2 | 272 | | | | 18 |
| Clay, Cleveland, Franklin, Moore, Randolph, Rowan, Stanly, and Union counties. | 54,450 | 12,200 | 40,150 | 2,100 | 29 | 1,327 | 22 | 1,121 | | 9 | 256 | 13 |
| Davidson, Guilford, and Henderson counties. | 82,500 | 13,500 | 68,500 | 500 | 8 | 415 | 5 | 180 | | 1 | 35 | |
| Undistributed petty mining | 81,404 | 14,134 | 65,971 | 1,299 | 24 | 1,111 | 13 | 652 | | 4 | 108 | 11 |
| SOUTH CAROLINA | 78,725 | 9,000 | 68,225 | 1,500 | 12 | 595 | 4 | 210 | | | | 7 |
| Chesterfield, Lancaster, Pickens, Union, and York counties. | 78,725 | 9,000 | 68,225 | 1,500 | 12 | 595 | 4 | 210 | | | | 7 |
| Undistributed petty mining | | | | | | | | | | | | |
| VIRGINIA. | | | | | | | | | | | | |
| Buckingham, Culpeper, Fluvanna, Orange, and Stafford counties, and undistributed petty mining. | 7,500 | 2,000 | 5,000 | 500 | 4 | 145 | 3 | 125 | | | | 2 |

[illegible]

MINERAL INDUSTRIES IN THE UNITED STATES.

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES.

ARIZONA.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|--------------------------|---|---|--|--------------------------|-------------|----------------------|-----------|-------------|--|-------------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| Total | 104,554 | 17,246 | 34,221 | \$406,474 | \$1,555,225 | \$3,254,151 | \$910,174 | \$2,343,977 | \$386,151 | \$1,477,465 |
| Cochise | 22,895 | 3,843 | ..... | 47,758 | 407,470 | 811,675 | 62,370 | 749,305 | 45,370 | 387,097 |
| Gila | 176 | 94 | 79 | 252 | 24,810 | 61,865 | 240 | 61,625 | 240 | 23,570 |
| Graham | 120 | 120 | ..... | 720 | 4,800 | 5,244 | 684 | 4,560 | 684 | 4,560 |
| Maricopa | 5,562 | ..... | 5,137 | ..... | ..... | 41,166 | 39,849 | 1,317 | ..... | ..... |
| Mohave | 3,079 | 1,238 | 1,316 | 13,625 | 209,788 | 269,290 | 42,799 | 217,491 | 12,944 | 199,299 |
| Pima | 35,893 | 3,341 | 12,961 | ..... | 390,470 | 738,316 | 57,306 | 681,010 | ..... | 370,947 |
| Pinal | 8,721 | 336 | 7,401 | 1,800 | 76,559 | 194,135 | 1,710 | 192,425 | 1,710 | 72,731 |
| Yavapai | 24,988 | 7,351 | 5,077 | 342,319 | 355,636 | 809,758 | 454,921 | 354,837 | 325,203 | 337,854 |
| Yuma | 3,120 | 870 | 2,250 | ..... | 85,692 | 181,702 | 100,295 | 81,407 | ..... | 81,407 |
| Undistributed gold ..... | ..... | ..... | ..... | ..... | ..... | 150,000 | 150,000 | ..... | ..... | ..... |

| COUNTIES. | COINING VALUE OF BULLION PRODUCED FROM ORE TREATED. | | PLACER BULLION. | | Total producing mines reported. | NUMBER OF MINES PRODUCING— | | | | | | |
|--------------------------|---|-----------|-----------------|---------|---------------------------------|----------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------------------|-----------------|
| | Gold. | Silver. | Gold. | Silver. | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. | Over \$500,000. |
| Total | \$258,370 | \$914,040 | \$80,495 | ..... | 154 | 26 | 32 | 34 | 7 | 4 | 1 | ..... |
| Cochise | 17,000 | 362,208 | ..... | ..... | 13 | ..... | 5 | 3 | 3 | 1 | 1 | ..... |
| Gila ..... | ..... | 38,055 | ..... | ..... | 5 | 1 | 2 | 2 | ..... | ..... | ..... | ..... |
| Graham ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... |
| Maricopa | 34,649 | 1,317 | 5,200 | ..... | 7 | 2 | 4 | 1 | ..... | ..... | ..... | ..... |
| Mohave | 29,855 | 18,192 | ..... | ..... | 25 | 8 | 12 | 4 | 1 | ..... | ..... | ..... |
| Pima | 2,148 | 357,591 | ..... | ..... | 8 | 1 | 1 | 4 | 1 | 1 | ..... | ..... |
| Pinal ..... | ..... | 119,694 | ..... | ..... | 6 | ..... | 4 | ..... | 1 | 1 | ..... | ..... |
| Yavapai | 129,718 | 16,983 | ..... | ..... | 84 | 14 | 53 | 16 | ..... | 1 | ..... | ..... |
| Yuma | 45,000 | ..... | 55,295 | ..... | 5 | ..... | ..... | 4 | 1 | ..... | ..... | ..... |
| Undistributed gold ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

| COUNTIES. | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
|--------------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| | | | | | | | | | | | | |
| Total | 64 | 118 | 703 | 2 | \$4.50 | \$3.89 | \$2.46 | \$1.50 | 219 | 187 | 205 | 145 |
| Cochise | 6 | 28 | 49 | ..... | 5.50 | 4.13 | 2.62 | ..... | 340 | 308 | 248 | ..... |
| Gila ..... | ..... | ..... | 10 | ..... | ..... | ..... | 3.00 | ..... | ..... | ..... | 60 | ..... |
| Graham ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Maricopa | 7 | 7 | 42 | ..... | 4.67 | 3.67 | 2.63 | ..... | 293 | 216 | 234 | ..... |
| Mohave | 6 | 4 | 15 | ..... | 5.33 | 4.00 | 3.10 | ..... | 196 | 257 | 190 | ..... |
| Pima | 26 | 26 | 185 | ..... | 4.20 | 4.00 | 2.12 | ..... | 210 | 82 | 190 | ..... |
| Pinal | 3 | 16 | 33 | ..... | 4.17 | 3.75 | 2.41 | ..... | 164 | 170 | 206 | ..... |
| Yavapai | 16 | 28 | 53 | 2 | 4.63 | 3.95 | 2.90 | 1.50 | 176 | 166 | 197 | 145 |
| Yuma ..... | ..... | 9 | 20 | ..... | ..... | 3.00 | 3.00 | ..... | ..... | 150 | 180 | ..... |
| Undistributed gold ..... | ..... | ..... | 296 | ..... | ..... | ..... | 2.46 | ..... | ..... | ..... | 205 | ..... |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

ARIZONA—Continued.

| COUNTIES. | EMPLOYÉS BELOW GROUND. | | | | | | | | | | | | Total number of mines. | Number of producing mines. | Mines working but non-productive. | Number of mines idle. |
|--------------------|--------------------------|---------|-----------|----------------------|------------------------|---------|-----------|----------------------|--|---------|-----------|----------------------|------------------------|----------------------------|-----------------------------------|-----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | | | | | |
| | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | | | | |
| Total | 34 | 1,467 | 132 | 1 | \$4.44 | \$3.17 | \$2.24 | \$1.50 | 193 | 215 | 199 | 89 | 192 | 154 | 14 | 24 |
| Cochise | 8 | 233 | 3 | ..... | 5.13 | 3.03 | 3.00 | ..... | 251 | 297 | 338 | ..... | 21 | 13 | 4 | 4 |
| Gila ..... | ..... | 38 | ..... | ..... | ..... | 3.09 | ..... | ..... | ..... | 231 | ..... | ..... | 9 | 5 | 2 | 2 |
| Graham ..... | ..... | 10 | ..... | ..... | ..... | 3.00 | ..... | ..... | ..... | 100 | ..... | ..... | 1 | 1 | ..... | ..... |
| Maricopa ..... | ..... | 205 | 22 | ..... | ..... | 3.15 | 2.66 | ..... | ..... | 142 | 309 | ..... | 11 | 7 | 2 | 2 |
| Mohave | 4 | 133 | 15 | ..... | 4.75 | 3.39 | 3.20 | ..... | 260 | 211 | 207 | ..... | 25 | 25 | ..... | ..... |
| Pima | 10 | 296 | 55 | ..... | 3.75 | 2.89 | 1.49 | ..... | 105 | 191 | 133 | ..... | 12 | 8 | 2 | 2 |
| Pinal | 3 | 75 | 21 | ..... | 4.66 | 3.11 | 2.52 | ..... | 251 | 256 | 218 | ..... | 12 | 6 | 1 | 5 |
| Yavapai | 8 | 395 | 16 | 1 | 4.44 | 3.47 | 2.84 | 1.50 | 197 | 222 | 230 | 89 | 96 | 84 | 3 | 9 |
| Yuma | 1 | 82 | ..... | ..... | 4.00 | 3.00 | ..... | ..... | 150 | 194 | ..... | ..... | 5 | 5 | ..... | ..... |
| Undistributed gold | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

| COUNTIES. | EXPENDITURES. | | | | | | | | | VALUE OF MINING PROPERTY. | | | | | |
|--------------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|-----------|-------------|-------------------|---------------------------|-----------------------|-----------------------|----------------------------------|--------------|-----------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies | Other expenditures. | Total value of plant. | Value of build- ings. | Value of railroads on sur- face. | Machin- ery. | Under- ground improvements. |
| | | | | | Males. | | Females. | | | | | | | | |
| | | | | | Num- ber. | Wages paid. | Num- ber. | Wages paid. | | | | | | | |
| Total | \$2,058,039 | \$1,599,259 | \$1,499,641 | \$48,902 | 30 | \$50,716 | | | \$348,662 | \$110,118 | \$19,734,884 | \$207,264 | \$17,800 | \$469,497 | \$1,906,560 |
| Cochise | 453,919 | 327,789 | 311,584 | 5,000 | 8 | 11,205 | | | 71,873 | 54,257 | 1,546,850 | 64,600 | 2,950 | 58,400 | 146,000 |
| Gila | 31,637 | 27,837 | 27,837 | | | | | | 2,750 | 1,050 | 229,700 | 4,000 | | 19,200 | 33,000 |
| Graham | 3,000 | 3,000 | 3,000 | | | | | | | | | | | | |
| Maricopa | 227,297 | 194,227 | 140,547 | 37,840 | 2 | 15,849 | | | 24,270 | 8,800 | 2,976,600 | 24,200 | 4,400 | 27,500 | 118,800 |
| Mohave | 143,436 | 128,183 | 128,183 | | | | | | 7,355 | 7,898 | 839,763 | 14,275 | 2,200 | 42,400 | 106,800 |
| Pima | 341,692 | 267,132 | 256,199 | 1,937 | 8 | 8,996 | | | 68,099 | 6,461 | 6,388,304 | 46,514 | | 155,857 | 972,400 |
| Pinal | 184,055 | 108,656 | 100,781 | | 6 | 7,875 | | | 68,690 | 6,709 | 3,082,550 | 14,700 | 100 | 18,850 | 132,000 |
| Yavapai | 451,013 | 329,345 | 318,420 | 4,125 | 6 | 6,800 | | | 98,025 | 23,643 | 4,371,117 | 34,725 | 8,150 | 136,090 | 409,500 |
| Yuma | 71,990 | 63,090 | 63,090 | | | | | | 7,600 | 1,300 | 300,000 | 4,250 | | 11,200 | 18,000 |
| Undistributed gold | 150,000 | 150,000 | 150,000 | | | | | | | | | | | | |

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | Number of animals. |
|--------------------|---|-----------------|----------|-----------------------------------|-----------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|-------------------|--------------|-----------------|-----|-----------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Machin- ery. | Sup- plies. | Boilers. | | Engines. | | Other power. | Motors. | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | |
| Total | \$105,370 | \$17,018,293 | \$10,100 | \$822,495 | \$198,060 | \$585,835 | \$44,600 | 88 | 2,563 | 60 | 1,030 | | 2 | 40 | 352 | |
| Cochise | 2,390 | 1,267,510 | 5,000 | 56,900 | 8,500 | 47,500 | 900 | 18 | 516 | 14 | 298 | Whims, 3..... | | | 4 | |
| Gila | | 172,500 | 1,000 | 23,000 | 1,000 | 20,000 | 2,000 | | | | | Windlasses, 3.... | | | | |
| Graham | | | | | | | | | | | | Whim, 1..... | | | 1 | |
| Maricopa | | 2,801,700 | | 180,400 | 26,400 | 147,400 | 6,600 | 15 | 299 | 13 | 396 | Windlasses, 3.... | | | | |
| Mohave | 38,400 | 635,688 | | 75,400 | 24,200 | 39,000 | 12,200 | 7 | 301 | 6 | 208 | Windlasses, 8.... | | | 34 | |
| Pima | 4,173 | 5,209,360 | | 138,060 | 45,760 | 88,400 | 3,900 | 23 | 546 | 13 | 80 | Whims, 8..... | | | 83 | |
| Pinal | 5,000 | 2,941,900 | | 88,000 | 16,000 | 68,000 | 4,000 | 2 | 150 | 2 | | Whips, 5..... | | | | |
| Yavapai | 55,407 | 3,723,085 | 4,100 | 260,735 | 75,200 | 170,535 | 15,000 | 20 | 661 | 11 | 44 | Windlass, 1..... | | | 72 | |
| Yuma | | 266,550 | | 6,000 | 1,000 | 5,000 | | 3 | 90 | 1 | | Whim, 1..... | | | | |
| Undistributed gold | | | | | | | | | | | | Hoist, 1..... | | | | |
| | | | | | | | | | | | | Whims, 9..... | 2 | 40 | 149 | |
| | | | | | | | | | | | | Wheel, 1..... | | | | |
| | | | | | | | | | | | | Windlass, 1..... | | | | |

MINERAL INDUSTRIES IN THE UNITED STATES.

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

CALIFORNIA.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|----------------------------|--|--|---|--------------------------|-----------|----------------------|--------------|-------------|--|-----------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| Total | 1,032,124 | 4,721 | 996,114 | \$203,969 | \$149,121 | \$13,960,529 | \$12,586,722 | \$1,373,807 | \$193,866 | \$141,664 |
| Alpine | | | | | | | | | | |
| Amador | 171,650 | | 171,559 | | | 911,252 | 503,246 | 3,006 | | |
| Butte | 7,851 | 6 | 7,506 | 42 | 137 | 301,592 | 300,680 | 912 | 39 | 130 |
| Calaveras | 118,441 | 116 | 113,979 | 7,155 | 3,755 | 736,881 | 733,058 | 3,823 | 6,797 | 3,567 |
| Colusa | 200 | | 200 | | | 4,187 | 4,061 | 126 | | |
| Del Norte | | | | | | 17,400 | 17,400 | | | |
| Eldorado | 6,100 | 23 | 5,712 | 2,639 | 3 | 183,575 | 183,210 | 365 | 2,507 | 3 |
| Fresno | 45,158 | 659 | 14,359 | 20,920 | 23,430 | 207,523 | 180,697 | 26,826 | 19,874 | 22,259 |
| Humboldt | | | | | | 78,847 | 78,709 | 138 | | |
| Inyo | 3,238 | 1,434 | 1,311 | 22,316 | 105,938 | 148,025 | 42,645 | 104,380 | 21,200 | 100,641 |
| Kern | 2,561 | 2 | 2,419 | 645 | 18 | 60,750 | 60,472 | 278 | 613 | 17 |
| Lassen | 1,731 | | 1,721 | | | 22,700 | 22,026 | 674 | | |
| Los Angeles | 5,200 | | 5,200 | | | 79,109 | 78,609 | 500 | | |
| Mariposa | 3,651 | | 931 | | | 20,652 | 20,652 | | | |
| Merced | | | | | | 100 | 100 | | | |
| Mono | 12,536 | 353 | 11,680 | 8,702 | 4,755 | 206,398 | 180,408 | 25,990 | 8,267 | 4,517 |
| Monterey | 250 | | 250 | | | 3,600 | | | | |
| Napa | 2,100 | | 2,100 | | | 59,206 | 307 | 49,899 | | |
| Nevada | 171,938 | 1,015 | 192,127 | 51,653 | | 2,006,757 | 1,967,649 | 39,108 | 49,070 | |
| Orange | 10 | 10 | | | 1,000 | 950 | | 950 | | 950 |
| Placer | 132,176 | 39 | 151,637 | 1,113 | 537 | 1,215,594 | 1,211,269 | 4,325 | 1,057 | 530 |
| Plumas | 73,102 | | 69,953 | | | 499,430 | 499,077 | 353 | | |
| Sacramento | | | | | | 166,090 | 166,000 | | | |
| San Bernardino | 73,217 | 244 | 72,778 | 1,285 | 6,648 | 1,138,222 | 2,821 | 1,105,401 | 1,221 | 6,316 |
| San Diego | 8,137 | | 8,069 | | | 251,073 | 251,071 | 2 | | |
| San Luis Obispo | | | | | | | | | | |
| Santa Barbara | | | | | | 7,045 | 7,045 | | | |
| Shasta | 28,179 | 614 | 24,845 | 71,117 | 2,880 | 332,996 | 328,964 | 4,032 | 67,658 | 2,734 |
| Sierra | 97,186 | | 93,256 | | | 1,329,192 | 1,327,290 | 1,902 | | |
| Siskiyou | 9,674 | | 9,422 | | | 808,198 | 807,910 | 288 | | |
| Stanislaus | | | | | | 15,955 | 15,955 | | | |
| Trinity | 15,485 | | 15,327 | | | 683,542 | 683,427 | 115 | | |
| Tulare | 876 | | 876 | | | 17,110 | 17,109 | 1 | | |
| Tuolumne | 19,657 | 224 | 18,181 | 16,382 | | 228,550 | 228,337 | 213 | 15,563 | |
| Ventura | 820 | | 620 | | | 6,831 | 6,831 | | | |
| Yuba | 959 | | 950 | | | 98,513 | 98,373 | 140 | | |
| Undistributed placer gold. | | | | | | 2,152,374 | 2,152,374 | | | |

CALIFORNIA—Continued.

[illegible]

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

CALIFORNIA—Continued

| COUNTIES. | EMPLOYEES ABOVE GROUND. | | | | | | | | | | | |
|----------------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 565 | 660 | 6,231 | 21 | \$3.30 | \$3.26 | \$2.05 | \$1.29 | 182 | 196 | 147 | 129 |
| Alpine | | | 2 | | | | 2.00 | | | | 12 | |
| Amador | 17 | 46 | 116 | 3 | 3.85 | 2.98 | 2.58 | 1.08 | 278 | 294 | 218 | 264 |
| Butte | 11 | 13 | 71 | | 3.12 | 3.60 | 2.91 | | 231 | 154 | 114 | |
| Calaveras | 15 | 48 | 54 | 1 | 3.44 | 3.28 | 2.37 | 1.50 | 248 | 188 | 204 | 54 |
| Colusa | | | 1 | | | | 2.50 | | | | 300 | |
| Del Norte | | | 1 | | | | 2.50 | | | | 150 | |
| Eldorado | 36 | 48 | 165 | 3 | 2.99 | 3.01 | 2.23 | 1.50 | 190 | 165 | 89 | 150 |
| Fresno | 4 | 28 | 57 | | 3.75 | 3.65 | 2.78 | | 153 | 202 | 189 | |
| Humboldt | 14 | | 78 | | 2.44 | | 1.96 | | 73 | | 176 | |
| Inyo | 12 | 10 | 40 | | 5.16 | 4.93 | 2.83 | | 179 | 131 | 91 | |
| Kern | 10 | 5 | 23 | 2 | 3.09 | 3.00 | 2.22 | 1.75 | 158 | 138 | 115 | 62 |
| Lassen | 1 | | 2 | | 3.00 | | 1.92 | | 300 | | 90 | |
| Los Angeles | 5 | 3 | 5 | | 3.56 | 3.00 | 2.40 | | 322 | 245 | 311 | |
| Mariposa | 1 | 3 | 15 | 2 | 3.50 | 3.50 | 2.40 | 1.00 | 270 | 270 | 98 | 155 |
| Merced | | | 1 | | | | 3.00 | | | | 30 | |
| Mono | 5 | 6 | 18 | | 3.60 | 4.68 | 3.24 | | 290 | 326 | 281 | |
| Monterey | | 2 | 5 | | | 4.50 | 3.00 | | | 78 | 78 | |
| Napa | 2 | 1 | 7 | | 4.00 | 5.00 | 2.00 | | 209 | 209 | 209 | |
| Nevada | 32 | 121 | 229 | | 4.05 | 3.19 | 2.51 | | 227 | 230 | 227 | |
| Orange | | | | | | | | | | | | |
| Placer | 25 | 83 | 391 | 2 | 3.82 | 2.67 | 2.19 | 2.13 | 150 | 136 | 138 | 100 |
| Plumas | 20 | 28 | 185 | | 3.20 | 3.03 | 2.60 | | 231 | 266 | 200 | |
| Sacramento | 8 | | 188 | | 2.75 | | 1.83 | | 265 | | 221 | |
| San Bernardino | 13 | 13 | 156 | | 4.10 | 3.62 | 2.99 | | 207 | 183 | 295 | |
| San Diego | 6 | 7 | 37 | | 4.60 | 3.91 | 2.73 | | 273 | 133 | 197 | |
| San Luis Obispo | | | 1 | | | | 1.16 | | | | 60 | |
| Santa Barbara | | | 10 | | | | 2.00 | | | | 100 | |
| Shasta | 11 | 35 | 84 | | 4.13 | 3.33 | 2.17 | | 245 | 276 | 199 | |
| Sierra | 34 | 62 | 1,540 | 2 | 3.82 | 3.75 | 1.93 | 0.75 | 181 | 187 | 87 | 190 |
| Siskiyou | 135 | 18 | 1,234 | 1 | 3.09 | 2.55 | 1.87 | 1.00 | 161 | 141 | 153 | 30 |
| Stanislaus | 4 | | 39 | | 3.00 | | 1.49 | | 310 | | 305 | |
| Trinity | 117 | 34 | 590 | 3 | 2.74 | 3.72 | 1.67 | 0.83 | 138 | 130 | 168 | 110 |
| Tulare | 1 | 2 | 2 | | 4.00 | 2.00 | 2.00 | | 300 | 100 | 300 | |
| Tuolumne | 21 | 32 | 66 | 1 | 3.40 | 3.48 | 2.48 | 2.00 | 202 | 184 | 175 | 30 |
| Ventura | 2 | 1 | 8 | | 3.50 | 3.00 | 2.94 | | 259 | 365 | 339 | |
| Yuba | 3 | 11 | 137 | 1 | 4.83 | 2.79 | 1.88 | 1.00 | 159 | 101 | 140 | 191 |
| Undistributed placer gold. | | | 714 | | | | 2.04 | | | | 146 | |

73.

CALIFORNIA—Continued.

| COUNTIES. | EMPLOYÉS BELOW GROUND. | | | | | | | | | | | | Total number of mines. | Number of producing mines. | Mines working but non-productive. | Number of mines idle. |
|----------------------------|--------------------------|---------|-----------|----------------------|------------------------|---------|-----------|----------------------|--|---------|-----------|----------------------|------------------------|----------------------------|-----------------------------------|-----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | | | | | |
| | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | | | | |
| Total | 303 | 5,522 | 944 | 8 | \$3.49 | \$2.74 | \$2.28 | \$1.50 | 217 | 209 | 237 | 103 | 2,109 | 1,359 | 244 | 506 |
| Alpine..... | | 12 | | | | 3.08 | | | | 45 | | | 13 | | 7 | 6 |
| Amador | 11 | 382 | 61 | 1 | 4.00 | 2.89 | 2.40 | 1.00 | 303 | 304 | 295 | 265 | 40 | 18 | 3 | 19 |
| Butte..... | 11 | 238 | 19 | | 3.37 | 2.58 | 2.28 | | 230 | 144 | 129 | | 174 | 147 | 7 | 20 |
| Calaveras..... | 12 | 309 | 24 | | 3.51 | 2.40 | 2.38 | | 285 | 276 | 146 | | 64 | 29 | 2 | 33 |
| Colusa..... | 1 | 2 | | | 4.00 | 2.50 | | | 300 | 300 | | | 1 | 1 | | |
| Del Norte..... | | | | | | | | | | | | | 3 | 3 | | |
| Eldorado | 27 | 495 | 30 | | 3.33 | 2.51 | 2.40 | | 149 | 169 | 242 | | 113 | 66 | 11 | 36 |
| Fresno | 3 | 160 | 26 | 1 | 4.26 | 2.88 | 2.09 | 1.00 | 267 | 183 | 159 | 18 | 41 | 21 | 6 | 14 |
| Humboldt..... | | | | | | | | | | | | | 33 | 30 | 1 | 2 |
| Inyo..... | 9 | 92 | 11 | | 4.20 | 3.33 | 2.42 | | 213 | 158 | 145 | | 43 | 35 | 1 | 7 |
| Kern | 1 | 58 | 12 | | 4.00 | 2.71 | 2.41 | | 300 | 149 | 182 | | 44 | 32 | 3 | 9 |
| Lassen | 3 | 13 | 11 | | 3.50 | 2.45 | 2.40 | | 300 | 144 | 255 | | 16 | 7 | 6 | 3 |
| Los Angeles..... | 1 | 18 | 10 | | 4.00 | 3.00 | 2.05 | | 311 | 261 | 302 | | 27 | 2 | | 25 |
| Mariposa..... | 3 | 85 | 11 | | 3.33 | 2.76 | 2.11 | | 255 | 124 | 147 | | 83 | 21 | 22 | 40 |
| Merced..... | | | | | | | | | | | | | 2 | 1 | | 1 |
| Mono..... | 5 | 72 | 10 | | 4.82 | 3.77 | 3.70 | | 308 | 167 | 301 | | 27 | 9 | 6 | 12 |
| Monterey..... | 1 | 12 | | | 4.00 | 3.00 | | | 300 | 234 | | | 1 | 1 | | |
| Napa..... | 1 | 15 | 8 | | 3.00 | 2.50 | 1.75 | | 209 | 209 | 209 | | 5 | 1 | | 4 |
| Nevada..... | 28 | 452 | 253 | | 2.93 | 2.73 | 2.29 | | 255 | 252 | 240 | | 106 | 58 | 7 | 41 |
| Orange..... | 1 | 5 | 2 | | 3.00 | 2.50 | 2.50 | | 60 | 52 | 30 | | 18 | 1 | 3 | 14 |
| Placer..... | 63 | 710 | 102 | 4 | 3.36 | 2.71 | 2.05 | 1.88 | 176 | 195 | 267 | 80 | 157 | 74 | 44 | 39 |
| Plumas..... | 12 | 252 | 49 | | 3.50 | 2.58 | 2.09 | | 244 | 237 | 284 | | 76 | 39 | 9 | 28 |
| Sacramento..... | | | | | | | | | | | | | 54 | 50 | | 4 |
| San Bernardino..... | 2 | 115 | 86 | | 6.00 | 3.05 | 3.00 | | 333 | 271 | 328 | | 40 | 14 | 9 | 17 |
| San Diego..... | 7 | 86 | 12 | | 4.41 | 2.94 | 2.70 | | 141 | 219 | 193 | | 15 | 4 | 2 | 9 |
| San Luis Obispo..... | | | | | | | | | | | | | 1 | | 1 | |
| Santa Barbara..... | | | | | | | | | | | | | 4 | 2 | | 2 |
| Shasta..... | 8 | 158 | 26 | | 3.85 | 2.89 | 2.20 | | 294 | 157 | 238 | | 47 | 30 | 6 | 11 |
| Sierra..... | 42 | 940 | 28 | | 3.68 | 2.77 | 2.60 | | 232 | 215 | 197 | | 196 | 136 | 37 | 23 |
| Siskiyou..... | 16 | 251 | 81 | | 2.79 | 2.38 | 1.67 | | 183 | 142 | 201 | | 324 | 264 | 30 | 30 |
| Stanislaus..... | | | | | | | | | | | | | 8 | 2 | | 6 |
| Trinity..... | 16 | 192 | 31 | 1 | 3.20 | 3.19 | 1.90 | 1.50 | 158 | 184 | 126 | 33 | 214 | 193 | 15 | 6 |
| Tulare..... | | 8 | | | | 2.50 | | | | 188 | | | 4 | 3 | | 1 |
| Tuolumne..... | 13 | 302 | 27 | | 3.83 | 2.79 | 2.32 | | 236 | 217 | 190 | | 62 | 38 | 3 | 21 |
| Ventura..... | 1 | 8 | 2 | | 4.00 | 3.44 | 2.50 | | 365 | 319 | 365 | | 13 | 2 | | 11 |
| Yuba..... | 5 | 80 | 12 | 1 | 2.85 | 2.20 | 2.00 | 1.00 | 236 | 211 | 191 | 191 | 40 | 25 | 3 | 12 |
| Undistributed placer gold. | | | | | | | | | | | | | | | | |

CALIFORNIA—Continued.

| COUNTIES. | EXPENDITURES. | | | | | | | | VALUE OF MINING PROPERTY. | | | | | | | |
|----------------------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|----------|-------------|---------------------------|---------------------|-----------------------|---------------------|--------------------------------|-------------|---------------------------|--|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of railroads on surface. | Machinery. | Underground improvements. | |
| | | | | | Males. | | Females. | | | | | | | | | |
| | | | | | Number. | Wages paid. | Number. | Wages paid. | | | | | | | | |
| Total | \$12,506,555 | \$9,680,265 | \$9,191,500 | \$296,373 | 160 | \$199,955 | 4 | \$1,437 | \$2,151,220 | \$666,061 | \$67,641,986 | \$1,662,014 | \$238,467 | \$4,330,986 | \$12,305,794 | |
| Alpine | 2,598 | 1,882 | 1,882 | | | | | | 626 | | 641,000 | 14,100 | | 30,290 | 396,000 | |
| Anaador | 783,381 | 494,172 | 470,242 | 7,500 | 15 | 16,430 | | | 242,023 | 47,186 | 7,126,166 | 252,060 | 12,265 | 407,757 | 649,392 | |
| Butte | 455,227 | 410,547 | 394,752 | 135 | 14 | 15,060 | | | 41,526 | 3,154 | 6,023,498 | 84,105 | 21,330 | 190,453 | 3,227,539 | |
| Calaveras | 505,065 | 335,906 | 326,530 | 2,915 | 6 | 6,455 | | | 156,724 | 12,435 | 1,478,310 | 112,925 | 3,705 | 89,843 | 93,490 | |
| Colusa | 3,600 | 3,450 | 3,450 | | | | | | 100 | 50 | 100,000 | 6,000 | | 20,000 | 6,000 | |
| Del Norte | 595 | 375 | 375 | | | | | | 290 | 20 | 1,000 | 100 | | 250 | | |
| Eldorado | 434,949 | 331,500 | 283,065 | 29,055 | 15 | 19,380 | | | 75,447 | 28,002 | 3,851,511 | 125,190 | 2,625 | 258,090 | 470,760 | |
| Fresno | 210,716 | 171,972 | 149,518 | 13,792 | 7 | 8,662 | | | 34,353 | 4,391 | 1,946,258 | 13,550 | 3,050 | 42,180 | 140,903 | |
| Humboldt | 67,779 | 39,820 | 39,820 | | | | | | 17,084 | 10,875 | 427,559 | 19,813 | 1,530 | 20,732 | 6,120 | |
| Inyo | 141,610 | 107,949 | 97,149 | 5,759 | 5 | 5,050 | | | 17,479 | 16,182 | 959,665 | 14,570 | 2,000 | 19,849 | 112,300 | |
| Kern | 52,442 | 41,632 | 40,111 | 321 | 1 | 1,200 | | | 8,322 | 2,483 | 441,099 | 8,360 | 2,349 | 23,152 | 89,040 | |
| Lassen | 20,548 | 17,084 | 17,084 | | | | | | 1,860 | 1,604 | 47,110 | 2,500 | 155 | 625 | 10,440 | |
| Los Angeles | 45,818 | 37,220 | 34,820 | | 1 | 2,490 | | | 7,998 | 600 | 120,000 | 1,400 | 1,200 | 1,300 | 18,000 | |
| Mariposa | 60,339 | 41,843 | 39,433 | 5 | 1 | 2,400 | | | 10,022 | 8,474 | 1,901,120 | 11,800 | 3,250 | 30,835 | 108,345 | |
| Merced | 90 | 90 | 90 | | | | | | | | 1,000 | | | | | |
| Mono | 217,011 | 131,821 | 124,619 | 7,202 | | | | | 62,992 | 22,198 | 958,021 | 38,050 | 2,700 | 67,860 | 239,336 | |
| Monterey | 10,570 | 6,770 | 6,770 | | | | | | 3,000 | 800 | 12,300 | 1,000 | | 5,000 | 2,000 | |
| Napa | 38,000 | 17,000 | 17,000 | | | | | | 20,000 | 1,000 | 84,000 | | | | 1,000 | |
| Nevada | 1,040,894 | 1,194,617 | 1,080,627 | 80,183 | 14 | 33,772 | 1 | 35 | 321,763 | 124,514 | 8,086,144 | 159,703 | 15,075 | 518,932 | 1,758,897 | |
| Orange | 1,400 | 980 | 980 | | | | | | 420 | | 20,000 | 200 | | 200 | 500 | |
| Placer | 922,817 | 669,100 | 621,598 | 36,497 | 9 | 11,005 | | | 196,992 | 56,815 | 4,859,287 | 112,473 | 5,511 | 169,285 | 1,446,324 | |
| Plumas | 411,488 | 291,163 | 270,853 | 3,210 | 9 | 11,100 | | | 105,785 | 14,540 | 1,749,691 | 88,950 | 5,675 | 50,895 | 282,604 | |
| Sacramento | 119,800 | 83,188 | 83,188 | | | | | | 15,859 | 20,762 | 758,613 | 18,063 | | 6,812 | 1,625 | |
| San Bernardino | 510,316 | 334,083 | 319,993 | 9,100 | 7 | 5,080 | | | 120,110 | 56,123 | 3,118,624 | 10,270 | 56,659 | 49,350 | 383,325 | |
| San Diego | 185,962 | 144,418 | 115,618 | 24,000 | 2 | 4,890 | | | 20,004 | 12,540 | 2,754,210 | 15,090 | 840 | 64,020 | 91,723 | |
| San Luis Obispo | 70 | 70 | 70 | | | | | | | | | | | | | |
| Santa Barbara | 2,317 | 2,000 | 2,000 | | | | | | 317 | | 12,000 | | | 50 | | |
| Shasta | 325,599 | 190,611 | 184,888 | 2,010 | 9 | 12,713 | | | 105,543 | 20,445 | 1,664,918 | 21,488 | 10,500 | 24,240 | 187,913 | |
| Sierra | 1,510,148 | 1,116,106 | 1,063,702 | 26,886 | 26 | 25,518 | | | 275,964 | 118,078 | 9,410,260 | 251,850 | 69,350 | 1,567,918 | 2,004,270 | |
| Siskiyou | 353,761 | 527,822 | 516,668 | 5,044 | 7 | 6,110 | | | 111,245 | 14,694 | 4,008,238 | 134,218 | 7,215 | 290,634 | 128,031 | |
| Stanislaus | 26,200 | 19,012 | 18,112 | | 1 | 1,800 | | | 3,040 | 3,248 | 20,000 | 500 | | 5,000 | | |
| Trinity | 449,419 | 332,257 | 307,784 | 20,348 | 5 | 3,325 | 2 | 890 | 85,319 | 31,843 | 3,047,733 | 100,345 | 4,345 | 223,640 | 145,454 | |
| Tulare | 7,892 | 7,192 | 7,192 | | | | | | 190 | 600 | 95,000 | 850 | 50 | 3,100 | 24,200 | |
| Tuolumne | 398,756 | 318,498 | 289,351 | 21,420 | 6 | 7,095 | 1 | 692 | 64,401 | 15,887 | 1,331,687 | 44,086 | 6,720 | 129,248 | 253,061 | |
| Ventura | 25,810 | 13,290 | 13,290 | | | | | | 1,200 | 11,320 | 115,000 | 400 | | 2,500 | 32,000 | |
| Yuba | 111,284 | 91,581 | 90,581 | 1,000 | | | | | 14,510 | 5,193 | 472,073 | 7,600 | 386 | 17,000 | 32,187 | |
| Undistributed placer gold. | 2,152,374 | 2,152,374 | 2,152,374 | | | | | | | | | | | | | |

GOLD AND SILVER.

75

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

CALIFORNIA—Continued.

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | | | Number of animals. |
|---------------------------------|---|-----------------|-----------|-----------------------------------|-----------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|-------------------------|--------------|-----------------|--------|-------|--|--------------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Machin- ery. | Sup- plies. | Boilers. | | Engines. | | Other power. | Motors. | | | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | | | |
| Total | \$585,431 | \$48,248,811 | \$270,483 | \$3,792,982 | \$976,241 | \$2,683,856 | \$132,885 | 298 | 9,813 | 266 | 8,623 | | | 370 | 12,063 | 1,007 | | |
| Alpine | 200 | 290,590 | | 125,000 | 12,500 | 112,500 | | 17 | 665 | 9 | 275 | Water, 19..... | | | | | | |
| Amador | 79,967 | 5,633,809 | 43,916 | 246,675 | 62,700 | 164,575 | 19,400 | 12 | 567 | 8 | 612 | Aircompressor, 1..... | 37 | 614 | | 32 | | |
| Butte | 9,153 | 2,483,528 | 7,365 | 112,346 | 46,777 | 63,612 | 1,957 | 27 | 670 | 32 | 761 | Whim, 1..... | | | | | | |
| Calaveras | 7,145 | 1,153,187 | 13,705 | 107,813 | 26,870 | 77,163 | 3,785 | 18 | 545 | 15 | 419 | Water, 24..... | 24 | 89 | | 8 | | |
| Colusa | 1,000 | 67,000 | | 27,000 | 6,000 | 20,000 | 1,000 | 2 | 80 | 3 | 80 | Water, 14..... | 7 | 173 | | 18 | | |
| Del Norte | | 650 | | | | | | | | | | | | | | 2 | | |
| Eldorado | 32,121 | 2,919,315 | 43,410 | 260,400 | 61,350 | 198,150 | 900 | 27 | 945 | 33 | 687 | Water, 33..... | | | | | | |
| Fresno | 7,975 | 1,697,200 | 1,400 | 86,580 | 15,260 | 56,220 | 15,100 | 9 | 309 | 5 | 152 | Windlasses, 9..... | 39 | 1,065 | | 36 | | |
| Humboldt | 7,115 | 372,249 | | 1,530 | 1,530 | | | | | | | Water, 2..... | | | | | | |
| Inyo | 5,665 | 805,250 | | 122,630 | 28,145 | 91,650 | 2,835 | 14 | 325 | 10 | 420 | Windlass, 1..... | 3 | 60 | | 35 | | |
| Kern | 3,001 | 315,197 | | 23,045 | 2,680 | 19,200 | 1,165 | 11 | 181 | 7 | 219 | Hydraulic, 26..... | | | | 34 | | |
| Lassen | 550 | 32,800 | | 7,000 | 3,215 | 3,425 | 360 | 2 | 21 | 1 | 65 | Windlasses, 13..... | | | | | | |
| Los Angeles | 1,100 | 99,000 | 7,000 | 15,500 | 4,306 | 10,700 | 500 | 1 | 20 | 1 | 21 | Whim, 1..... | 1 | 8 | | 132 | | |
| Mariposa | 4,070 | 1,742,820 | | 67,370 | 29,870 | 34,300 | 3,200 | 8 | 370 | 4 | 147 | Water, 5..... | | | | | | |
| Merced | | 1,000 | | | | | | | | | | Whims, 5..... | 18 | 367 | | 39 | | |
| Mono | 7,175 | 599,550 | 4,250 | 112,450 | 27,750 | 78,900 | 5,890 | 8 | 345 | 6 | 410 | Water, 8..... | 1 | 10 | | 8 | | |
| Monterey | 300 | 4,000 | | | | | | 1 | 45 | 2 | 21 | Whims, 2..... | 1 | | | | | |
| Napa | | 83,000 | | 16,000 | 5,000 | 10,000 | 1,000 | 2 | 49 | 2 | 49 | Water, 2..... | | | | | | |
| Nevada | 49,704 | 5,548,087 | 44,741 | 379,114 | 83,304 | 284,544 | 11,260 | 18 | 995 | 23 | 911 | Whim, 1..... | | | | 10 | | |
| Orange | 100 | 19,000 | | 150 | | 150 | | | | | | Water, 7..... | 13 | 285 | | 9 | | |
| Placer | 25,814 | 3,054,988 | 44,892 | 247,223 | 60,487 | 171,232 | 15,504 | 8 | 345 | 6 | 410 | Aircompressor, 1..... | 2 | 78 | | 21 | | |
| Plumas | 16,807 | 1,304,700 | | 218,420 | 47,359 | 157,170 | 13,900 | 5 | 290 | 6 | 358 | Water, 4..... | | | | | | |
| Sacramento | 16,925 | 715,188 | | 11,363 | 875 | 8,750 | 1,738 | | | | | Steam, 1..... | 50 | 1,071 | | 19 | | |
| San Bernardino | 34,975 | 2,579,200 | 854 | 372,050 | 111,950 | 250,400 | 9,700 | 14 | 422 | 6 | 227 | Pelton wheel, 1..... | | | | | | |
| San Diego | 67,800 | 2,514,732 | | 20,580 | 3,180 | 16,200 | 1,200 | 4 | 162 | 4 | 162 | Water, 22..... | | | | | | |
| San Luis Obispo | | | | | | | | | | | | Windlasses, 2..... | | | | | | |
| Santa Barbara | | 11,950 | | 300 | | 150 | 150 | | | | | Whim, 1..... | 5 | 4,000 | | 153 | | |
| Shasta | 21,202 | 1,396,200 | 3,375 | 189,895 | 68,383 | 116,700 | 4,812 | 6 | 143 | 3 | 81 | Windlasses, 2..... | | | | 66 | | |
| Sierra | 82,872 | 5,400,810 | 33,190 | 634,898 | 180,500 | 447,890 | 6,508 | 34 | 658 | 20 | 414 | Water, 1..... | 11 | 266 | | 72 | | |
| Siskiyou | 38,162 | 3,407,703 | 2,275 | 80,795 | 21,645 | 54,925 | 4,225 | 7 | 121 | 8 | 324 | Water, 32..... | 43 | 794 | | 42 | | |
| Stanislaus | 250 | 14,250 | | 5,750 | 500 | 5,000 | 250 | | | | | Hydraulic, 16..... | 18 | 369 | | 77 | | |
| Trinity | 54,250 | 2,499,701 | 19,998 | 110,910 | 24,900 | 85,100 | 910 | 9 | 217 | 21 | 212 | Water, 51..... | | | | | | |
| Tulare | 200 | 62,600 | | 5,300 | 300 | 5,000 | | 2 | 56 | 2 | 28 | Overshot wheels, 2..... | 23 | 15 | | 3 | | |
| Tuolumne | 8,533 | 884,947 | 92 | 166,460 | 35,770 | 126,770 | 3,920 | 11 | 574 | 8 | 461 | Water, 41..... | | | | | | |
| Ventura | 1,300 | 78,800 | | 8,100 | 1,900 | 5,200 | 1,000 | 2 | 33 | 2 | 60 | Hydraulic, 2..... | | | | 31 | | |
| Yuba | | 414,900 | | 10,330 | 1,250 | 8,280 | 800 | | | | | Water, 2..... | | | | | | |
| Undistributed pla- cer gold. | | | | | | | | | | | | Water, 3..... | | | | | | |
| | | | | | | | | | | | | Whim, 1..... | 11 | 441 | | 35 | | |
| | | | | | | | | | | | | Windlasses, 2..... | | | | | | |
| | | | | | | | | | | | | Water, 1..... | 2 | 13 | | 15 | | |
| | | | | | | | | | | | | Water, 9..... | 8 | 218 | | | | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

COLORADO.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|--------------------------|---|---|--|--------------------------|----------------|----------------------|---------------|----------------|--|----------------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| Total | 852, 211 | 640, 917 | 148, 856 | \$2, 501, 008 | \$24, 968, 319 | \$27, 641, 610 | \$3, 883, 859 | \$23, 757, 751 | \$2, 375, 958 | \$23, 719, 903 |
| Boulder | 24, 267 | 3, 486 | 12, 468 | 225, 854 | 101, 213 | 417, 782 | 310, 725 | 107, 057 | 214, 560 | 96, 150 |
| Chaffee | 28, 945 | 27, 049 | 720 | 227, 051 | 303, 705 | 550, 429 | 260, 627 | 289, 802 | 215, 699 | 288, 520 |
| Clear Creek | 34, 224 | 31, 250 | 3, 381 | 312, 296 | 2, 465, 499 | 2, 715, 003 | 372, 400 | 2, 342, 603 | 296, 681 | 2, 342, 224 |
| Conejos | 12 | 12 | ..... | 3, 262 | 3, 378 | 6, 213 | 3, 099 | 3, 114 | 3, 099 | 3, 114 |
| Custer | 1, 514 | 452 | 50 | 20 | 61, 198 | 58, 904 | 19 | 58, 885 | 19 | 58, 139 |
| Dolores | 2, 702 | 2, 463 | ..... | 40, 540 | 502, 834 | 516, 205 | 38, 512 | 477, 693 | 38, 512 | 477, 693 |
| Eagle | 8, 426 | 8, 416 | ..... | 128, 056 | 368, 723 | 471, 941 | 121, 654 | 350, 287 | 121, 654 | 350, 287 |
| Fremont ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Gilpin | 119, 553 | 29, 594 | 92, 824 | 614, 779 | 450, 279 | 1, 721, 747 | 1, 289, 420 | 432, 327 | 584, 040 | 427, 766 |
| Gunnison | 7, 494 | 4, 248 | 300 | 15, 081 | 188, 818 | 205, 882 | 16, 162 | 189, 720 | 14, 897 | 179, 377 |
| Hinsdale | 5, 411 | 389 | ..... | 1, 572 | 21, 553 | 21, 969 | 1, 494 | 20, 475 | 1, 494 | 20, 475 |
| Lake | 365, 169 | 343, 336 | 6, 180 | 174, 367 | 8, 679, 211 | 8, 467, 151 | 221, 167 | 8, 245, 984 | 165, 649 | 8, 245, 250 |
| La Plata | 759 | 78 | 25 | 3, 570 | 2, 968 | 7, 611 | 4, 791 | 2, 820 | 3, 391 | 2, 820 |
| Larimer | 385 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Ouray | 14, 363 | 14, 151 | 335 | 245, 188 | 1, 752, 444 | 1, 901, 131 | 236, 309 | 1, 664, 822 | 232, 929 | 1, 664, 822 |
| Park | 33, 706 | 23, 931 | 8, 075 | 34, 709 | 332, 288 | 449, 560 | 127, 886 | 321, 674 | 32, 974 | 315, 674 |
| Pitkin | 128, 150 | 118, 373 | 1, 500 | ..... | 7, 726, 509 | 7, 362, 422 | 22, 238 | 7, 340, 184 | ..... | 7, 340, 184 |
| Rio Grande | 172 | 96 | ..... | 10, 664 | 800 | 10, 891 | 10, 131 | 760 | 10, 131 | 760 |
| Route ..... | ..... | ..... | ..... | ..... | ..... | 18, 400 | 18, 400 | ..... | ..... | ..... |
| Saguache | 626 | 490 | 120 | 3, 429 | 24, 312 | 28, 554 | 5, 458 | 23, 096 | 3, 258 | 23, 096 |
| San Juan | 15, 889 | 7, 094 | 3, 710 | 94, 035 | 490, 779 | 610, 362 | 142, 687 | 467, 675 | 89, 333 | 466, 240 |
| San Miguel | 15, 294 | 8, 847 | 6, 485 | 258, 417 | 842, 018 | 1, 107, 006 | 306, 328 | 800, 678 | 245, 496 | 799, 917 |
| Summit | 45, 110 | 17, 162 | 12, 683 | 107, 518 | 649, 890 | 892, 447 | 274, 352 | 618, 095 | 102, 142 | 617, 395 |
| Undistributed gold | | | | | | 100, 000 | 100, 000 | | | |

[illegible]

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COLORADO—Continued.

[illegible]

MINERAL INDUSTRIES IN THE UNITED STATES.

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

COLORADO—Continued.

| COUNTIES. | EXPENDITURES. | | | | | | | | VALUE OF MINING PROPERTY. | | | | | | |
|---------------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|--------------|-------------|---------------------------|---------------------|-----------------------|---------------------|--------------------------------|-----------------|--------------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of railroads on surface. | Ma- chinery. | Under- ground improvements. |
| | | | | | Num- ber. | Wages paid. | Num- ber. | Wages paid. | | | | | | | |
| Total | \$13,834,332 | \$10,114,682 | \$9,339,875 | \$400,772 | 219 | \$368,639 | 7 | \$5,396 | \$2,559,705 | \$1,159,945 | \$137,881,531 | \$1,235,853 | \$137,562 | \$2,961,167 | \$26,316,640 |
| Boulder..... | 413,694 | 269,697 | 252,714 | 8,650 | 8 | 8,333 | ----- | ----- | 78,380 | 65,617 | 8,821,846 | 65,840 | 4,185 | 130,099 | 2,037,593 |
| Chaffee..... | 362,497 | 298,972 | 279,001 | 2,221 | 9 | 17,750 | ----- | ----- | 55,196 | 8,329 | 3,841,855 | 56,035 | 15,285 | 147,445 | 491,201 |
| Clear Creek..... | 1,385,554 | 1,131,361 | 1,071,344 | 34,729 | 11 | 25,288 | ----- | ----- | 169,133 | 85,060 | 16,023,934 | 108,845 | 25,095 | 299,077 | 3,597,608 |
| Conejos..... | 33,850 | 28,070 | 27,390 | 770 | ----- | ----- | ----- | ----- | 3,980 | 1,800 | 88,700 | 1,110 | 100 | 1,100 | 13,010 |
| Custer..... | 70,520 | 50,332 | 47,682 | ----- | 5 | 2,650 | ----- | ----- | 19,938 | 250 | 1,451,990 | 16,400 | 3,070 | 51,400 | 254,010 |
| Dolores..... | 186,980 | 144,592 | 139,992 | ----- | 3 | 4,600 | ----- | ----- | 33,450 | 8,938 | 3,327,150 | 10,735 | 759 | 18,450 | 276,840 |
| Eagle..... | 241,493 | 196,448 | 190,728 | 2,320 | 3 | 3,400 | ----- | ----- | 37,852 | 7,193 | 2,826,950 | 22,225 | 14,735 | 54,300 | 572,260 |
| Fremont..... | 8,300 | 3,625 | 3,625 | ----- | ----- | ----- | ----- | ----- | 4,675 | ----- | 75,100 | 625 | 750 | 1,300 | 64,725 |
| Gilpin..... | 1,161,876 | 749,471 | 664,218 | 55,503 | 19 | 29,750 | ----- | ----- | 243,388 | 169,017 | 8,158,424 | 87,425 | 2,781 | 192,587 | 2,160,543 |
| Gunnison..... | 369,957 | 307,376 | 278,187 | 20,539 | 4 | 8,450 | 1 | 200 | 50,250 | 12,331 | 6,347,012 | 71,265 | 7,775 | 61,988 | 1,347,093 |
| Hinsdale..... | 98,924 | 69,742 | 69,742 | ----- | ----- | ----- | ----- | ----- | 19,776 | 9,406 | 1,078,570 | 22,275 | 2,650 | 12,915 | 298,000 |
| Lake..... | 3,412,364 | 2,408,118 | 2,232,860 | 41,831 | 57 | 131,555 | 1 | 1,872 | 568,963 | 435,283 | 27,348,594 | 265,480 | 1,014 | 1,060,082 | 6,290,523 |
| La Plata..... | 33,813 | 26,482 | 26,422 | 60 | ----- | ----- | ----- | ----- | 7,331 | ----- | 908,000 | 10,200 | ----- | 1,380 | 121,027 |
| Larimer..... | 5,469 | 4,054 | 3,934 | 120 | ----- | ----- | ----- | ----- | 617 | 798 | 128,375 | 560 | ----- | 765 | 12,295 |
| Ouray..... | 1,290,671 | 824,492 | 755,197 | 55,078 | 9 | 14,217 | ----- | ----- | 365,501 | 100,678 | 11,724,187 | 102,427 | 15,176 | 204,361 | 1,296,215 |
| Park..... | 362,133 | 268,852 | 237,144 | 16,658 | 16 | 12,050 | ----- | ----- | 63,716 | 32,571 | 5,591,520 | 63,150 | 2,280 | 126,870 | 809,440 |
| Pitkin..... | 2,536,661 | 1,910,329 | 1,780,045 | 48,924 | 57 | 79,031 | 3 | 2,320 | 482,648 | 143,093 | 18,112,513 | 99,321 | 6,250 | 290,450 | 3,076,069 |
| Rio Grande..... | 10,760 | 8,410 | 8,150 | 260 | ----- | ----- | ----- | ----- | 1,450 | 900 | 781,250 | 3,500 | 10,000 | 3,000 | 55,700 |
| Routt..... | 12,955 | 8,369 | 8,369 | ----- | ----- | ----- | ----- | ----- | 4,354 | 232 | 138,450 | 2,575 | ----- | 4,750 | ----- |
| Saguache..... | 35,512 | 28,363 | 27,363 | 1,000 | ----- | ----- | ----- | ----- | 4,194 | 2,955 | 467,788 | 5,650 | 400 | 8,473 | 153,625 |
| San Juan..... | 526,067 | 351,265 | 303,011 | 54,054 | 5 | 4,200 | ----- | ----- | 128,742 | 46,660 | 5,379,550 | 70,725 | 16,778 | 43,610 | 993,782 |
| San Miguel..... | 587,000 | 454,960 | 420,870 | 25,100 | 8 | 8,110 | 1 | 900 | 119,571 | 12,449 | 3,887,434 | 40,650 | 1,773 | 135,650 | 904,400 |
| Summit..... | 586,682 | 474,291 | 421,977 | 32,955 | 11 | 19,255 | 1 | 104 | 96,606 | 15,785 | 10,772,339 | 88,835 | 6,765 | 111,165 | 1,489,731 |
| Undistributed gold. | 100,000 | 100,000 | 100,000 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |

GOLD AND SILVER.

79

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

COLORADO—Continued.

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | | | Number of animals. |
|--------------------|---|-----------------|-----------|-----------------------------------|-----------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|--------------------|--------------|-----------------|-------|-------|--|--------------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Ma- chinery. | Sup- plies. | Boilers. | | Engines. | | Other power. | Motors. | | | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | | | |
| Total | \$719,062 | \$105,708,422 | \$802,825 | \$2,432,244 | \$690,719 | \$1,699,165 | \$42,360 | 622 | 23,929 | 502 | 13,972 | | | 34 | 1,253 | 1,109 | | |
| Boulder..... | 9,505 | 6,556,674 | 18,000 | 257,750 | 76,350 | 181,200 | 209 | 48 | 1,795 | 36 | 859 | Horse whims, 27. | | | | 38 | | |
| Chaffee..... | 32,269 | 3,019,120 | 80,500 | 26,200 | 4,000 | 21,650 | 550 | 8 | 342 | 3 | 129 | Horse whims, 2. | | | | 25 | | |
| Clear Creek..... | 25,615 | 11,835,444 | 132,250 | 282,950 | 95,150 | 185,850 | 1,950 | 62 | 2,037 | 61 | 1,384 | Whims, 7. | 6 | 270 | | 120 | | |
| | | | | | | | | | | | | Windlasses, 6. | | | | | | |
| Conejos..... | 850 | 72,530 | | | | | | 1 | 15 | 1 | 8 | Water, 2. | | | | | | |
| Custer..... | 1,600 | 1,125,510 | | 241,000 | 75,700 | 157,800 | 7,500 | 26 | 1,429 | 15 | 255 | Windlass, 1. | | | | 6 | | |
| Dolores..... | 19,740 | 2,995,635 | 5,000 | | | | | 4 | 200 | 1 | 33 | | 1 | 8 | | 30 | | |
| Eagle..... | 3,800 | 2,148,315 | 11,325 | 12,000 | 1,500 | 10,500 | | 22 | 628 | 13 | 272 | | 1 | 60 | | 8 | | |
| Fremont..... | 500 | 7,200 | | | | | | | | | | Windlass, 1. | | | | | | |
| Gilpin..... | 282,750 | 5,370,898 | 61,530 | 409,490 | 89,465 | 316,175 | 3,850 | 77 | 2,891 | 53 | 1,504 | Horse whims, 15. | 6 | 194 | | 70 | | |
| | | | | | | | | | | | | Horse whip, 1. | | | | | | |
| | | | | | | | | | | | | Horse windlass, 1. | | | | | | |
| | | | | | | | | | | | | Windlasses, 41. | 1 | 10 | | 45 | | |
| Gunnison..... | 80,235 | 4,767,296 | 11,360 | 57,050 | 15,000 | 42,600 | 50 | 15 | 343 | 12 | 250 | Whims, 9. | | | | | | |
| | | | | | | | | | | | | Tunnels, 15. | | | | | | |
| | | | | | | | | | | | | Water, 3. | | | | | | |
| Hinsdale..... | 6,105 | 1,334,865 | 1,700 | 27,500 | 13,500 | 14,000 | | 3 | 75 | 3 | 64 | Hoist, 1. | | | | 48 | | |
| | | | | | | | | | | | | Water, 2. | | | | | | |
| | | | | | | | | | | | | Hoisters, 2. | | | | | | |
| Lake..... | 52,978 | 19,548,433 | 110,084 | 316,115 | 78,104 | 228,651 | 9,360 | 172 | 7,744 | 152 | 6,265 | Windlass, 1. | 1 | 36 | | 85 | | |
| | | | | | | | | | | | | Water wheel, 1. | | | | | | |
| | | | | | | | | | | | | Tunnels, 4. | | | | | | |
| La Plata..... | 1,090 | 774,353 | | | | | | 1 | 10 | | | Winzes, 2. | | | | | | |
| Larimer..... | 240 | 114,515 | | | | | | | | | | Windlass, 1. | 2 | 75 | | 4 | | |
| | | | | | | | | | | | | Water, 1. | | | | | | |
| | | | | | | | | | | | | Whim, 1. | | | | | | |
| Ouray..... | 97,650 | 9,919,194 | 89,164 | 13,500 | 5,000 | 6,000 | 2,500 | 30 | 1,151 | 14 | 344 | Water, 1. | 3 | 73 | | 53 | | |
| | | | | | | | | | | | | Electric, 1. | | | | | | |
| | | | | | | | | | | | | Gravity, 1. | | | | | | |
| | | | | | | | | | | | | Water, 1. | | | | | | |
| Park..... | 17,040 | 4,561,740 | 11,000 | 145,000 | 35,300 | 108,200 | 1,500 | 20 | 612 | 10 | 645 | Windlasses, 2. | 2 | | | 41 | | |
| | | | | | | | | | | | | Whims, 3. | | | | | | |
| | | | | | | | | | | | | Tunnels, 2. | | | | | | |
| | | | | | | | | | | | | Windlasses, 54. | | | | | | |
| | | | | | | | | | | | | Whims, 9. | | | | | | |
| Pitkin..... | 26,320 | 14,432,087 | 181,116 | 73,139 | 30,350 | 40,139 | 2,650 | 78 | 2,539 | 81 | 782 | Drills, 7. | 4 | 30 | | 60 | | |
| | | | | | | | | | | | | Pumps, 6. | | | | | | |
| | | | | | | | | | | | | Compressors, 2. | | | | | | |
| | | | | | | | | | | | | Tunnel, 1. | | | | | | |
| Rio Grande..... | 1,150 | 707,900 | | 4,700 | 2,000 | 2,500 | 200 | | | | | Windlass, 1. | | | | | | |
| Routt..... | 125 | 131,000 | | | | | | | | | | Water, 2. | | | | | | |
| Saguache..... | 1,125 | 298,515 | | 27,050 | 11,000 | 16,050 | | 5 | 208 | 4 | 161 | Whims, 6. | 1 | 2 | | 4 | | |
| San Juan..... | 43,800 | 4,192,355 | 18,500 | 222,700 | 67,200 | 144,500 | 11,000 | 12 | 377 | 8 | 141 | Water, 2. | 5 | 495 | | 79 | | |
| | | | | | | | | | | | | Tunnel, 1. | | | | | | |
| San Miguel..... | 3,990 | 2,799,675 | 1,296 | 105,500 | 22,506 | 82,000 | 1,000 | 9 | 550 | 6 | 78 | Hydraulic, 1. | | | | 360 | | |
| | | | | | | | | | | | | Water, 1. | | | | | | |
| | | | | | | | | | | | | Whim, 1. | | | | | | |
| | | | | | | | | | | | | Hydraulic, 2. | | | | | | |
| Summit..... | 10,585 | 8,995,258 | 70,000 | 210,600 | 68,600 | 141,950 | 50 | 29 | 1,073 | 29 | 498 | Windlasses, 8. | 1 | | | 32 | | |
| | | | | | | | | | | | | Tunnels, 2. | | | | | | |
| Undistributed gold | | | | | | | | | | | | Water, 2. | | | | | | |

MINERAL INDUSTRIES IN THE UNITED STATES.

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

IDAHO.

| COUNTIES. | BULLION PRODUCED FROM ORE SOLD OR TREATED IN 1889. | | EMPLOYEES ABOVE GROUND. | | | | | | | | | | | |
|------------------|--|---------------------|-------------------------------|-----------------|-----------|-------------------------------|-------------------------------|-----------------|-----------|-------------------------------|---|-----------------|-----------|-------------------------------|
| | | | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Gold. (Value.) | Silver. (Value.) | Foremen or over- seers. | Mechan- ics. | Laborers. | Boys under 16 years. | Foremen or over- seers. | Mechan- ics. | Laborers. | Boys under 16 years. | Foremen or over- seers. | Mechan- ics. | Laborers. | Boys under 16 years. |
| Total | \$1,984,159 | \$4,056,482 | 128 | 354 | 964 | 2 | \$4.64 | \$4.04 | \$3.04 | \$1.25 | 211 | 203 | 187 | 285 |
| Ada | 3,307 | 65 | | | 6 | | | | 3.00 | | | | 187 | |
| Alturas | 13,869 | 465,946 | 29 | 74 | 57 | | 4.78 | 4.04 | 3.14 | | 158 | 170 | 156 | |
| Bear Lake | | | | | 2 | | | | 2.25 | | | | 55 | |
| Bingham | 20,236 | 41 | 10 | 51 | 153 | | 3.50 | 3.00 | 2.50 | | 120 | 120 | 86 | |
| Boise | 299,090 | 248,474 | 6 | 20 | 46 | | 4.00 | 4.65 | 3.47 | | 63 | 191 | 182 | |
| Cassia | 12,671 | 18,419 | 1 | 2 | 5 | | 4.72 | 3.97 | 3.01 | | 212 | 208 | 189 | |
| Custer | 164,475 | 728,627 | 9 | 21 | 76 | | 4.83 | 4.36 | 3.00 | | 215 | 242 | 265 | |
| Elmore | 314,132 | 27,016 | 5 | 29 | 61 | | 5.00 | 4.25 | 3.34 | | 104 | 177 | 109 | |
| Idaho | 242,356 | 12,061 | 5 | 15 | 39 | | 4.72 | 3.97 | 3.61 | | 212 | 208 | 189 | |
| Kootenai | 20,000 | 8,500 | 1 | 2 | 4 | | 4.72 | 3.97 | 3.01 | | 212 | 208 | 189 | |
| Latah | 1,000 | | | | 10 | | | | 2.00 | | | | 60 | |
| Lemhi | 377,868 | 130,099 | 15 | 24 | 170 | | 4.16 | 4.20 | 3.09 | | 304 | 140 | 195 | |
| Logan | 24,107 | 419,450 | 7 | 11 | 42 | 1 | 5.07 | 3.99 | 3.50 | 1.50 | 323 | 304 | 311 | 319 |
| Owyhee | 258,045 | 432,777 | 4 | 15 | 47 | | 5.00 | 4.33 | 3.27 | | 287 | 287 | 267 | |
| Shoshone | 222,712 | 1,557,022 | 34 | 86 | 224 | 1 | 5.14 | 4.33 | 3.13 | 1.00 | 252 | 267 | 234 | 260 |
| Washington | 10,282 | 8,045 | 11 | 4 | 22 | | 4.13 | 3.50 | 2.92 | | 160 | 259 | 55 | |

| COUNTIES. | EMPLOYEES BELOW GROUND. | | | | | | | | | | | |
|------------------|--------------------------|---------|-----------|----------------------------|--------------------------|---------|-----------|----------------------------|--|---------|-----------|----------------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. |
| Total | 163 | 2,566 | 318 | | \$4.79 | \$3.59 | \$3.10 | | 247 | 204 | 206 | |
| Ada | | | | | | | | | | | | |
| Alturas | 45 | 547 | 34 | | 4.57 | 3.57 | 3.26 | | 230 | 190 | 144 | |
| Bear Lake | | 4 | | | | 3.00 | | | | 55 | | |
| Bingham | 1 | 8 | 1 | | 4.91 | 3.50 | 3.10 | | 240 | 217 | 220 | |
| Boise | 11 | 159 | 6 | | 5.43 | 3.61 | 3.00 | | 306 | 257 | 200 | |
| Cassia | 1 | 11 | 1 | | 4.91 | 3.50 | 3.10 | | 240 | 217 | 220 | |
| Custer | 18 | 245 | 18 | | 4.91 | 3.60 | 3.00 | | 345 | 248 | 302 | |
| Elmore | 13 | 207 | 37 | | 4.00 | 3.49 | 3.00 | | 167 | 177 | 174 | |
| Idaho | 6 | 98 | 13 | | 4.91 | 4.00 | 3.10 | | 240 | 22 | 220 | |
| Kootenai | 1 | 10 | 1 | | 4.91 | 3.50 | 3.10 | | 240 | 217 | 220 | |
| Latah | | 30 | | | | 3.00 | | | | 100 | | |
| Lemhi | 10 | 321 | 44 | | 4.25 | 3.56 | 3.05 | | 242 | 194 | 133 | |
| Logan | 5 | 114 | 39 | | 5.10 | 3.50 | 3.23 | | 304 | 288 | 110 | |
| Owyhee | 10 | 157 | 21 | | 4.70 | 3.79 | 3.41 | | 134 | 196 | 350 | |
| Shoshone | 29 | 554 | 103 | | 5.29 | 3.57 | 3.00 | | 241 | 243 | 258 | |
| Washington | 4 | 101 | | | 4.00 | 3.75 | | | 330 | 94 | | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

IDAHO—Continued.

| COUNTIES. | Total number of mines. | Number of producing mines. | Mines working but not producing. | Number of mines idle. | NUMBER OF MINES PRODUCING— | | | | | | EXPENDITURES. | | | |
|------------------|------------------------|----------------------------|----------------------------------|-----------------------|----------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------------|-----------------------|---------------------------|----------------------|
| | | | | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1933. | Paid to contractors. |
| Total | 536 | 421 | 65 | 46 | 209 | 147 | 42 | 12 | 8 | 3 | \$4,870,484 | \$3,636,362 | \$3,331,151 | \$194,257 |
| Ada | | | | | | | | | | | 2,552 | 1,909 | 1,740 | 97 |
| Alturas | 164 | 130 | 19 | 15 | 80 | 40 | 9 | 1 | | | 712,972 | 574,861 | 547,621 | 12,253 |
| Bear Lake | 3 | 1 | 1 | 1 | 1 | | | | | | 1,232 | 1,057 | 997 | 150 |
| Bingham | 8 | 8 | | | 5 | 3 | | | | | 169,433 | 92,820 | 65,380 | 20,299 |
| Boise | 60 | 46 | 7 | 7 | 20 | 20 | 4 | | 2 | | 323,878 | 267,623 | 219,202 | 47,296 |
| Cassia | 19 | 10 | | | 5 | 5 | | | | | 23,267 | 17,401 | 15,855 | 895 |
| Custer | 67 | 44 | 18 | 5 | 18 | 17 | 5 | 1 | 2 | 1 | 411,247 | 342,729 | 341,553 | 1,176 |
| Elmore | 21 | 18 | | 3 | 6 | 6 | 4 | 2 | | | 411,555 | 292,273 | 292,969 | 57,916 |
| Idaho | 21 | 21 | | | 19 | 8 | 2 | 1 | | | 190,717 | 142,706 | 130,076 | 7,239 |
| Kootenai | 9 | 9 | | | 5 | 4 | | | | | 21,277 | 15,915 | 14,503 | 810 |
| Latah | 7 | 1 | 2 | 4 | | 1 | | | | | 11,200 | 10,200 | 10,200 | |
| Lemhi | 50 | 48 | | 2 | 25 | 17 | 4 | 2 | | | 583,689 | 449,443 | 394,899 | 13,149 |
| Logan | 12 | 9 | 1 | 2 | 5 | 1 | 2 | | | 1 | 314,112 | 233,090 | 218,679 | 14,411 |
| Owyhee | 55 | 31 | 17 | 7 | 12 | 11 | 5 | 3 | | | 285,854 | 216,928 | 210,878 | 1,210 |
| Shoshone | 42 | 38 | 4 | | 13 | 11 | 7 | 2 | 4 | 1 | 1,344,494 | 974,866 | 905,596 | 15,916 |
| Washington | 7 | 7 | | | 4 | 3 | | | | | 62,955 | 52,536 | 51,092 | 1,444 |

| COUNTIES. | EXPENDITURES—continued. | | | | | | VALUE OF MINING PROPERTY. | | | | | | | |
|------------------|-------------------------|-------------|----------|-------------|--------------------|---------------------|---------------------------|---------------------|--------------------------------|------------|---------------------------|----------------|--------------|-----------|
| | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of railroads on surface. | Machinery. | Underground improvements. | Mine supplies. | Mine proper. | Cash. |
| | Males. | | Females. | | | | | | | | | | | |
| | Num-ber. | Wages paid. | Num-ber. | Wages paid. | | | | | | | | | | |
| Total | 104 | \$160,261 | 9 | \$693 | \$889,958 | \$294,164 | \$44,194,594 | \$1,012,677 | \$233,183 | \$923,439 | \$3,295,875 | \$415,634 | \$33,154,216 | \$104,570 |
| Ada | | 72 | | | 469 | 174 | 21,798 | 437 | 185 | 499 | 3,672 | 201 | 16,740 | 64 |
| Alturas | 16 | 14,982 | | | 111,575 | 26,536 | 12,663,876 | 140,922 | 5,902 | 240,348 | 4,674,838 | 69,723 | 7,503,768 | 23,375 |
| Bear Lake | | | | | 175 | | 13,260 | 175 | | | 3,675 | 19 | 10,000 | |
| Bingham | 3 | 7,141 | | | 4,714 | 71,949 | 415,478 | 15,497 | 75,336 | 45,267 | 22,445 | 7,602 | 222,299 | 27,032 |
| Boise | 1 | 1,130 | | | 52,532 | 3,718 | 3,741,412 | 44,886 | 97,419 | 90,887 | 253,320 | 73,769 | 3,163,393 | 17,741 |
| Cassia | | 658 | | 1 | 4,277 | 1,589 | 198,608 | 3,978 | 1,684 | 4,547 | 33,464 | 1,828 | 152,520 | 587 |
| Custer | | | | | 68,030 | 488 | 2,645,412 | 32,854 | 5,880 | 43,218 | 687,813 | 7,718 | 1,867,929 | |
| Elmore | 11 | 31,388 | | | 106,527 | 12,755 | 1,996,463 | 444,552 | 3,990 | 113,250 | 420,280 | 33,250 | 981,141 | |
| Idaho | 4 | 5,882 | | 9 | 35,026 | 12,985 | 1,922,776 | 32,809 | 13,764 | 37,331 | 242,922 | 14,939 | 1,536,616 | 4,795 |
| Kootenai | | 601 | | 1 | 3,968 | 1,454 | 181,605 | 3,639 | 1,541 | 4,159 | 30,607 | 1,672 | 129,450 | 537 |
| Latah | | | | | 1,000 | | 47,000 | | | | | 2,000 | 45,000 | |
| Lemhi | 29 | 40,713 | 9 | 682 | 89,549 | 44,697 | 4,133,072 | 75,242 | 974 | 18,384 | 471,416 | 45,072 | 3,521,984 | |
| Logan | | | | | 63,139 | 17,883 | 1,500,140 | 19,260 | | 50,290 | 317,790 | 16,585 | 1,088,725 | 7,490 |
| Owyhee | 2 | 4,840 | | | 61,470 | 8,456 | 5,485,608 | 101,398 | 30,250 | 170,858 | 590,735 | 43,929 | 4,638,438 | |
| Shoshone | 38 | 53,354 | | | 280,444 | 89,184 | 7,382,140 | 93,328 | 45,175 | 105,627 | 489,169 | 64,483 | 6,566,413 | 17,949 |
| Washington | | | | | 8,123 | 2,296 | 1,845,937 | 3,700 | 1,083 | 3,574 | 104,329 | 32,851 | 1,700,460 | |

MINERAL INDUSTRIES IN THE UNITED STATES.

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

IDAHO—Continued.

| COUNTIES. | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | Number of animals. |
|------------------|-----------------------------------|------------|-------------|-----------|---------------|--------------|----------|--------------|--------------------|----------|--------------|--------------------|
| | Total. | Buildings. | Machinery. | Supplies. | Boilers. | | Engines. | | Other power. | Motors. | | |
| | | | | | Num-ber. | Horse power. | Num-ber. | Horse power. | | Num-ber. | Horse power. | |
| Total | \$2,540,888 | \$760,118 | \$1,599,888 | \$180,882 | 225 | 5,559 | 80 | 2,296 | | 67 | 3,274 | 273 |
| Ada | 1,191 | 341 | 763 | 87 | | 3 | | 2 | | | 1 | 1 |
| Alturas | 564,322 | 142,896 | 367,513 | 53,913 | 79 | 919 | 9 | 412 | Water, 1 | 5 | 79 | 86 |
| Bear Lake | | | | | | | | | | | | |
| Bingham | 7,277 | 2,084 | 4,661 | 532 | 1 | 20 | | 9 | Hydraulic, 1 | | 7 | 16 |
| Boise | 216,401 | 43,823 | 170,502 | 2,096 | 17 | 636 | 13 | 268 | | | | 17 |
| Cassia | 10,849 | 3,107 | 6,550 | 792 | 1 | 31 | | 14 | | | 11 | 1 |
| Custer | 2,235 | 735 | 1,470 | | 3 | 110 | | | Water, 1 | | | |
| | | | | | | | | | Whim, 1 | 1 | 308 | 41 |
| Elmore | 232,750 | 59,850 | 142,310 | 30,590 | 21 | 1,184 | 21 | 340 | Hydraulic, 1 | 13 | 1,490 | 40 |
| | | | | | | | | | Water, 1 | | | |
| Idaho | 88,648 | 25,286 | 56,785 | 6,477 | 7 | 249 | 3 | 114 | | 2 | 87 | 8 |
| Kootenai | 9,909 | 2,842 | 6,342 | 725 | 1 | 28 | | 13 | | | 10 | 1 |
| Latah | | | | | | | | | | | | |
| Lemhi | 439,449 | 198,940 | 226,455 | 14,054 | 19 | 273 | 10 | 418 | Hydraulic, 1 | 34 | 881 | 98 |
| Logan | 80,250 | 24,610 | 53,500 | 2,140 | 14 | 823 | 12 | 327 | Water, 1 | 2 | 56 | 6 |
| | | | | | | | | | Water, 1 | | | |
| Owyhee | 238,128 | 70,785 | 131,285 | 36,058 | 19 | 756 | 7 | 99 | Windlass, 1 | 2 | 24 | 3 |
| | | | | | | | | | Whim, 1 | | | |
| Shoshone | 598,969 | 179,324 | 388,032 | 31,613 | 43 | 527 | 5 | 279 | Water, 6 | 8 | 260 | 4 |
| Washington | 50,540 | 5,415 | 43,320 | 1,805 | | | | | Windlass, 1 | | | 4 |

MICHIGAN.

| COUNTIES. | Ore pro- duced. (Tons.) | Ore sold or treated. (Tons.) | BULLION PRODUCED FROM ORE SOLD OR TREATED IN 1889. | | EMPLOYÉS ABOVE GROUND. | | | | | | | | | | | |
|-----------------------------|-------------------------------|---------------------------------------|--|---------------------|-------------------------------|-----------------|-----------|-------------------------------|-------------------------------|-----------------|----------------|-------------------------------|---|----------------------|----------------|-------------------------------|
| | | | | | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | | | Gold. (Value.) | Silver. (Value.) | Foremen or over- seers. | Mechan- ics. | Laborers. | Boys under 16 years. | Foremen or over- seers. | Mechan- ics. | Labor- ers. | Boys under 16 years. | Fore- men or over- seers. | Me- chan- ics. | Labor- ers. | Boys under 16 years. |
| Total | 31,865 | 31,865 | \$87,040 | \$18,885 | 2 | 7 | 32 | ..... | \$3.25 | \$2.25 | \$1.81 | ..... | 312 | 350 | 319 | ..... |
| Gogebie and Mar- quette. | 31,865 | 31,865 | 87,040 | 12,317 | 2 | 7 | 32 | ..... | 3.25 | 2.25 | 1.81 | ..... | 312 | 350 | 319 | ..... |
| Houghton and Ke- weenaw. | ..... | ..... | ..... | 60,568 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

| COUNTIES. | EMPLOYÉS BELOW GROUND. | | | | | | | | | | | | Total number of mines. | Number of pro- ducing mines. | Mines working but not pro- ducing. | Number of mines idle. |
|-----------------------------|-------------------------------|---------|----------------|-------------------------------|------------------------------------|---------|----------------|-------------------------------|---|---------|----------------|-------------------------------|------------------------------|---------------------------------------|--|-----------------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | | | | | |
| | Foremen or over- seers. | Miners. | Labor- ers. | Boys under 16 years. | Fore- men or over- seers. | Miners. | Labor- ers. | Boys under 16 years. | Fore- men or over- seers. | Miners. | Labor- ers. | Boys under 16 years. | | | | |
| Total | 1 | 40 | 13 | ..... | \$2.25 | \$2.00 | \$1.80 | ..... | 310 | 310 | 310 | ..... | 3 | 2 | 1 | ..... |
| Gogebie and Mar- quette. | 1 | 40 | 13 | ..... | 2.25 | 2.00 | 1.80 | ..... | 310 | 310 | 310 | ..... | 3 | 2 | 1 | ..... |
| Houghton and Ke- weenaw. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

a Product of copper mines.

MICHIGAN—Continued.

[illegible]

MONTANA.

[illegible]

MONTANA—Continued.

[illegible]

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

NEVADA—Continued.

| COUNTIES. | EMPLOYÉS ABOVE GROUND. | | | | | | | | | | | |
|--------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 83 | 261 | 779 | 1 | \$5. 07 | \$4. 56 | \$3. 22 | \$2. 00 | 304 | 298 | 270 | 365 |
| Churchill | 1 | 1 | 2 | | 3. 00 | 4. 00 | 3. 00 | | 180 | 150 | 139 | |
| Douglas | | | 1 | | | | 3. 00 | | | | 225 | |
| Elko | 5 | 54 | 56 | | 4. 60 | 4. 47 | 3. 50 | | 331 | 283 | 299 | |
| Esmeralda | 8 | 32 | 63 | | 4. 94 | 4. 28 | 3. 21 | | 267 | 234 | 291 | |
| Eureka | 9 | 17 | 125 | | 5. 72 | 4. 03 | 3. 20 | | 295 | 238 | 308 | |
| Humboldt | | 4 | 10 | | | 3. 63 | 2. 00 | | | 215 | 198 | |
| Lander | 5 | 11 | 23 | | 6. 90 | 3. 96 | 2. 13 | | 354 | 199 | 190 | |
| Lincoln | 6 | 19 | 43 | | 4. 71 | 3. 97 | 2. 47 | | 344 | 352 | 297 | |
| Lyon | 8 | 5 | 110 | 1 | 4. 88 | 3. 65 | 2. 72 | 2. 00 | 216 | 200 | 181 | 365 |
| Nye | 3 | 2 | | | 4. 33 | 4. 00 | | | 299 | 365 | | |
| Storey | 33 | 111 | 107 | | 5. 04 | 5. 04 | 3. 88 | | 323 | 330 | 317 | |
| Washoe | | | | | | | | | | | | |
| White Pine | 5 | 5 | 42 | | 4. 55 | 3. 90 | 3. 25 | | 300 | 223 | 180 | |
| Undistributed gold | | | 137 | | | | 3. 22 | | | | 270 | |

[illegible][illegible]

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

NEVADA—Continued.

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | Number of ani- mals. |
|--------------------|---|-----------------|-----------|-----------------------------------|-----------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|-----------------------|--------------|-----------------|-----|----------------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Machin- ery. | Sup- plies. | Boilers. | | Engines. | | Other power. | Motors. | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | |
| Total | \$348,854 | \$15,202,039 | \$138,250 | \$1,818,176 | \$458,881 | \$1,187,352 | \$171,943 | 189 | 9,283 | 139 | 11,048 | | 34 | 705 | 233 | |
| Churchill | 1,500 | 21,500 | | 23,500 | 2,000 | 18,000 | 3,500 | 1 | 60 | 1 | 16 | | | | 24 | |
| Douglas | 1,127 | 427,550 | 115 | 3,608 | 1,300 | 2,100 | 208 | 3 | 23 | 2 | 18 | Windlass, 1..... | | | 2 | |
| Elko..... | 13,750 | 1,117,350 | 4 | 375,500 | 126,000 | 248,500 | 3,000 | 9 | 425 | 6 | 293 | Whim, 1..... | | | 2 | |
| Esmeralda..... | 9,898 | 1,231,410 | 17,790 | 252,207 | 98,546 | 124,859 | 28,802 | 9 | 445 | 7 | 553 | Whims, 2..... | 1 | 132 | 40 | |
| Eureka | 98,637 | 4,118,900 | 5,357 | 323,693 | 53,400 | 240,593 | 29,700 | 23 | 742 | 20 | 774 | Aircompressor,1..... | | | | |
| | | | | | | | | | | | | Hand, 2..... | | | | |
| | | | | | | | | | | | | Whims, 9..... | 15 | 17 | 37 | |
| | | | | | | | | | | | | Whips, 6..... | | | | |
| Humboldt | 135,900 | 329,500 | 2,500 | 30,225 | 10,125 | 26,600 | 2,500 | 2 | 74 | 3 | 86 | | 3 | | 7 | |
| Lander | 8,740 | 724,160 | | 74,632 | 12,800 | 51,200 | 10,632 | 7 | 540 | 6 | 233 | | 1 | 200 | 14 | |
| Lincoln..... | 16,096 | 411,405 | 34,917 | 177,153 | 36,200 | 110,000 | 30,953 | 13 | 450 | 8 | 250 | Windlasses, 2..... | | | 25 | |
| | | | | | | | | | | | | Hand, 1..... | | | | |
| Lyon | 1,500 | 167,825 | | 76,293 | 17,800 | 39,300 | 19,193 | 3 | 120 | 3 | 109 | Hand, 1..... | | | | |
| | | | | | | | | | | | | Whim, 1..... | 4 | 275 | 35 | |
| | | | | | | | | | | | | Water, 5..... | | | | |
| Nye | 8,425 | 2,123,740 | 3,000 | 175,100 | 49,200 | 121,800 | 4,100 | 15 | 655 | 6 | 499 | Whims, 4..... | | | | |
| | | | | | | | | | | | | Windlass, 1..... | 3 | 4 | 13 | |
| | | | | | | | | | | | | Water, 1..... | | | | |
| Storey..... | 40,185 | 3,481,707 | 74,313 | 165,105 | 27,200 | 122,900 | 15,005 | 95 | 5,382 | 70 | 7,570 | Aircompressors,4..... | | | | |
| | | | | | | | | | | | | Water, 6..... | 6 | 76 | 20 | |
| | | | | | | | | | | | | Whim, 1..... | | | | |
| Washoe | 200 | 21,000 | | 5,000 | 2,000 | 3,000 | | | | | | Whim, 1..... | | | 4 | |
| | | | | | | | | | | | | Whim, 1..... | | | | |
| White Pine..... | 12,896 | 1,025,992 | 254 | 127,160 | 22,310 | 80,500 | 24,350 | 9 | 368 | 7 | 642 | Water, 4..... | 1 | 1 | 10 | |
| | | | | | | | | | | | | Windlasses, 4..... | | | | |
| Undistributed gold | | | | | | | | | | | | | | | | |

NEW MEXICO.

| COUNTIES. | Total amount of ore pro- duced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRO- DUCED FROM ORE SOLD. | |
|--------------------------|---|--|---|--------------------------|-------------|-------------------------|-----------|-------------|--|-------------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| | | | | | | | | | | |
| Total | 105,870 | 40,501 | 58,486 | \$137,562 | \$1,288,485 | \$2,433,233 | \$815,655 | \$1,617,578 | \$130,684 | \$1,224,062 |
| Bernalillo | 769 | | 650 | | | 6,740 | 6,740 | | | |
| Colfax | 1,051 | | 476 | | | 23,221 | 23,166 | 55 | | |
| Donna Ana | 7,337 | 7,275 | | | 76,868 | 73,025 | | 73,025 | | 73,025 |
| Grant | 63,428 | 17,483 | 44,078 | 31,032 | 346,680 | 1,121,237 | 436,025 | 685,212 | 29,500 | 329,346 |
| Lincoln | 6,550 | | 5,800 | | | 55,208 | 52,190 | 3,108 | | |
| Rio Arriba | 600 | | 600 | | | 5,340 | 5,240 | 100 | | |
| San Miguel | | | | | | | | | | |
| Santa Fe | 4,065 | 2,907 | 643 | 17,600 | 53,175 | 92,216 | 41,694 | 50,522 | 16,720 | 50,517 |
| Sierra | 11,461 | 7,045 | 3,589 | 83,766 | 740,562 | 844,081 | 135,933 | 708,148 | 84,328 | 703,534 |
| Socorro | 10,609 | 5,791 | 2,650 | 144 | 71,200 | 112,165 | 14,757 | 97,408 | 136 | 67,640 |
| Undistributed gold | | | | | | 100,000 | 100,000 | | | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

NEW MEXICO—Continued.

| COUNTIES. | COINING VALUE OF BULLION PRODUCED FROM ORE TREATED. | | PLACER BULLION. | | Total producing mines reported. | NUMBER OF MINES PRODUCING— | | | | | | |
|--------------------|---|-----------|-----------------|---------|---------------------------------|----------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------------------|-----------------|
| | Gold. | Silver. | Gold. | Silver. | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. | Over \$500,000. |
| Total | \$541,380 | \$393,516 | \$43,591 | | 129 | 28 | 56 | 34 | 7 | 3 | 1 | |
| Bernalillo | 6,740 | | | | 3 | 1 | 2 | | | | | |
| Colfax | 7,715 | 55 | 15,451 | | 6 | 2 | 3 | 1 | | | | |
| Donna Ana | | | | | 3 | 1 | 1 | | 1 | | | |
| Grant | 401,525 | 355,866 | 5,000 | | 55 | 12 | 24 | 15 | 2 | 2 | | |
| Lincoln | 52,100 | 3,108 | | | 4 | | 2 | 2 | | | | |
| Rio Arriba | 2,100 | 100 | 3,140 | | 4 | 2 | 2 | | | | | |
| San Miguel | | | | | | | | | | | | |
| Santa Fe | 19,974 | 5 | 5,000 | | 11 | 2 | 7 | 1 | 1 | | | |
| Sierra | 36,605 | 4,614 | 15,000 | | 29 | 3 | 11 | 10 | 3 | 1 | 1 | |
| Socorro | 14,621 | 29,768 | | | 14 | 5 | 4 | 5 | | | | |
| Undistributed gold | | | | | | | | | | | | |

| COUNTIES. | EMPLOYÉS ABOVE GROUND. | | | | | | | | | | | |
|--------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 45 | 90 | 520 | 13 | \$4.09 | \$3.50 | \$2.31 | \$1.27 | 169 | 193 | 204 | 166 |
| Bernalillo | | 2 | 4 | | | 2.00 | 3.00 | | | 60 | 50 | |
| Colfax | 7 | | 41 | | 3.93 | | 2.23 | | 151 | | 186 | |
| Donna Ana | 2 | 2 | 6 | | 4.00 | 4.00 | 3.00 | | 180 | 300 | 300 | |
| Grant | 13 | 44 | 93 | 8 | 4.39 | 3.32 | 2.09 | 1.19 | 163 | 170 | 208 | 223 |
| Lincoln | 6 | 4 | 19 | 2 | 3.08 | 3.38 | 2.55 | 1.00 | 115 | 133 | 138 | 30 |
| Rio Arriba | 1 | 4 | 6 | | 2.00 | 3.50 | 1.50 | | 200 | 284 | 241 | |
| San Miguel | | | | | | | | | | | | |
| Santa Fe | 3 | 10 | 64 | | 3.83 | 3.90 | 2.14 | | 214 | 242 | 248 | |
| Sierra | 7 | 20 | 49 | 1 | 4.18 | 3.76 | 2.64 | 2.00 | 211 | 219 | 194 | 42 |
| Socorro | 6 | 4 | 26 | 2 | 5.07 | 3.88 | 2.71 | 1.50 | 178 | 176 | 165 | 137 |
| Undistributed gold | | | 212 | | | | 2.31 | | | | 204 | |

| COUNTIES. | EMPLOYÉS BELOW GROUND. | | | | | | | | | | | | Total number of mines. | Number of producing mines. | Mines working but not producing. | Number of mines idle. |
|--------------------|--------------------------|---------|-----------|----------------------|------------------------|---------|-----------|----------------------|--|---------|-----------|----------------------|------------------------|----------------------------|----------------------------------|-----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | | | | | |
| | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | | | | |
| Total | 48 | 1,202 | 154 | 12 | \$4.15 | \$3.15 | \$2.26 | \$1.21 | 233 | 214 | 228 | 211 | 250 | 129 | 57 | 64 |
| Bernalillo | | 21 | 1 | | | 2.48 | 3.00 | | | 59 | 6 | | 5 | 3 | 1 | 1 |
| Colfax | 2 | 13 | | | 4.50 | 2.75 | | | 265 | 219 | | | 8 | 6 | 2 | |
| Donna Ana | 1 | 45 | 4 | | 4.00 | 3.40 | 3.00 | | 309 | 280 | 300 | | 4 | 3 | | 1 |
| Grant | 15 | 440 | 86 | 12 | 3.93 | 3.03 | 2.16 | 1.21 | 244 | 230 | 206 | 211 | 89 | 55 | 11 | 23 |
| Lincoln | 5 | 69 | 3 | | 3.00 | 2.93 | 2.50 | | 185 | 163 | 312 | | 37 | 4 | 18 | 15 |
| Rio Arriba | | 2 | | | | 2.00 | | | | 350 | | | 4 | 4 | | |
| San Miguel | | 6 | | | | 3.00 | | | | 47 | | | 3 | | 2 | 1 |
| Santa Fe | 5 | 85 | 6 | | 3.82 | 3.10 | 2.50 | | 264 | 253 | 312 | | 11 | 11 | | |
| Sierra | 13 | 385 | 42 | | 4.69 | 3.38 | 2.41 | | 235 | 211 | 243 | | 69 | 29 | 19 | 21 |
| Socorro | 7 | 136 | 12 | | 4.14 | 3.08 | 2.00 | | 200 | 179 | 261 | | 26 | 14 | 4 | 2 |
| Undistributed gold | | | | | | | | | | | | | | | | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

NEW MEXICO—Continued.

| COUNTIES. | EXPENDITURES. | | | | | | | | VALUE OF MINING PROPERTY. | | | | | | |
|--------------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|----------|-------------|---------------------------|---------------------|-----------------------|---------------------|--------------------------------|------------|---------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of railroads on surface. | Machinery. | Underground improvements. |
| | | | | | Males. | | Females. | | | | | | | | |
| | | | | | No. | Wages paid. | No. | Wages paid. | | | | | | | |
| Total | \$1,730,126 | \$1,333,462 | \$1,226,857 | \$55,383 | 30 | \$49,454 | 2 | \$1,768 | \$270,706 | \$125,958 | \$18,268,499 | \$250,349 | \$15,000 | \$881,045 | \$2,413,506 |
| Bernalillo..... | 6,431 | 3,598 | 3,598 | | | | | | 2,783 | 80 | 135,040 | 2,500 | | 1,770 | 12,000 |
| Colfax | 50,818 | 34,448 | 31,298 | 2,050 | 1 | 1,100 | | | 7,491 | 8,879 | 730,250 | 10,050 | 100 | 75,500 | 50,000 |
| Donna Ana | 64,690 | 57,580 | 57,380 | 200 | | | | | 6,610 | 500 | 227,150 | 1,300 | | 2,150 | 40,000 |
| Grant | 569,452 | 433,493 | 408,314 | 13,234 | 7 | 11,945 | | | 119,617 | 16,342 | 7,891,271 | 98,730 | 8,375 | 159,160 | 1,090,658 |
| Lincoln | 63,645 | 55,935 | 52,335 | | 2 | 3,600 | | | 5,115 | 2,598 | 906,627 | 4,100 | 700 | 8,450 | 130,790 |
| Rio Arriba | 19,900 | 8,400 | 8,400 | | | | | | 7,877 | 3,623 | 138,440 | 1,500 | 100 | 7,500 | 21,000 |
| San Miguel | 1,790 | 1,440 | 1,440 | | | | | | 350 | | 15,000 | 300 | 200 | | 1,000 |
| Santa Fe | 151,028 | 120,050 | 116,892 | 158 | 1 | 3,000 | | | 17,400 | 13,578 | 1,822,575 | 20,500 | 25 | 508,275 | 42,800 |
| Sierra | 546,630 | 410,222 | 345,676 | 39,741 | 14 | 24,805 | | | 69,957 | 66,451 | 5,220,946 | 62,619 | 4,500 | 89,140 | 904,708 |
| Socorro | 155,709 | 108,296 | 101,524 | | 5 | 5,004 | 2 | 1,768 | 33,506 | 13,907 | 1,181,200 | 48,750 | 1,000 | 29,100 | 120,550 |
| Undistributed gold | 100,000 | 100,000 | 100,000 | | | | | | | | | | | | |

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | Num- ber of ani- mals. |
|--------------------|---|-----------------|-----------|-----------------------------------|-----------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|---------------------|--------------|-----------------|-----|---------------------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Machin- ery. | Sup- plies. | Boilers. | | Engines. | | Other power. | Motors. | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | |
| Total | \$312,822 | \$14,273,655 | \$116,122 | \$1,079,910 | \$201,540 | \$829,150 | \$49,220 | 100 | 3,773 | 62 | 1,912 | | | | 200 | |
| Bernalillo..... | 120 | 118,650 | | 5,100 | 1,100 | 4,000 | | 1 | 20 | 1 | 20 | | | | 9 | |
| Colfax | 2,400 | 586,200 | | 13,750 | 2,700 | 11,000 | 50 | 7 | 432 | 3 | 32 | | | | | |
| Donna Ana | 300 | 183,400 | | | | | | | | | | Whim, 1 | | | 1 | |
| Grant | 275,275 | 6,245,073 | 14,000 | 667,033 | 164,190 | 469,650 | 33,193 | 49 | 1,847 | 33 | 1,211 | Windlasses, 3 | | | 127 | |
| | | | | | | | | | | | | Whims, 5 | | | | |
| Lincoln | 1,427 | 761,160 | | 30,000 | 2,500 | 25,000 | 2,500 | 5 | 240 | 6 | 91 | | | | 10 | |
| Rio Arriba | 900 | 107,400 | 40 | 9,100 | 1,400 | 7,500 | 200 | 4 | 73 | | | | | | 4 | |
| San Miguel | | 13,500 | | 20,300 | 300 | 20,000 | | 1 | 80 | | | | | | 6 | |
| Santa Fe | 1,025 | 1,249,050 | | | | | | 4 | 111 | 1 | 80 | Whims, 2 | | | 20 | |
| Sierra | 28,075 | 4,047,822 | 84,082 | 273,800 | 14,300 | 257,000 | 2,500 | 27 | 900 | 16 | 433 | Whims, 3 | | | 15 | |
| | | | | | | | | | | | | Windlass, 1 | | | | |
| Socorro | 3,300 | 960,500 | 18,000 | 60,827 | 15,050 | 35,000 | 10,777 | 2 | 70 | 2 | 45 | Whims, 2 | | | 8 | |
| Undistributed gold | | | | | | | | | | | | | | | | |

OREGON.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|--------------------|---|---|--|--------------------------|----------|----------------------|-----------|----------|--|----------|
| | | | | Gold. | Silver. | Total. | Gold. | Silver. | Gold. | Silver. |
| Total | 32,809 | 327 | 26,698 | \$14,361 | \$19,768 | \$987,691 | \$964,309 | \$23,382 | \$13,642 | \$18,780 |
| Baker | 9,598 | 40 | 8,584 | 5,084 | 318 | 308,719 | 307,097 | 1,622 | 4,830 | 302 |
| Columbia | | | | | | | | | | |
| Coos | | | | | | 21,327 | 21,327 | | | |
| Crook | 3 | 3 | | 316 | | 300 | 300 | | 300 | |
| Curry | | | | | | 4,879 | 4,879 | | | |
| Douglas | | | | | | 2,500 | 2,500 | | | |
| Grant | 2,435 | 300 | 695 | 6,500 | 19,040 | 93,553 | 73,613 | 19,940 | 6,175 | 18,088 |
| Jackson | 490 | | 80 | | | 31,438 | 31,433 | 5 | | |
| Josephine | 631 | 41 | 48 | 2,111 | 410 | 49,915 | 49,525 | 390 | 2,065 | 390 |
| Lane | | | | | | | | | | |
| Linn | | | | | | | | | | |
| Malheur | 130 | | 130 | | | 38,350 | 38,350 | | | |
| Union | 19,522 | 3 | 17,161 | 350 | | 236,710 | 235,285 | 1,425 | 332 | |
| Undistributed gold | | | | | | 200,000 | 200,000 | | | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

OREGON—Continued.

[illegible]

EMPLOYÉS ABOVE GROUND.

| COUNTIES. | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
|--------------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 59 | 132 | 1,490 | 3 | \$3.32 | \$2.92 | \$2.29 | \$0.83 | 140 | 199 | 130 | 240 |
| Baker | 7 | 23 | 227 | | 4.63 | 4.40 | 2.31 | | 156 | 136 | 147 | |
| Columbia | | | | | | | | | | | | |
| Coos | 14 | | 95 | | 2.75 | | 2.58 | | 105 | | 106 | |
| Crook | | | | | | | | | | | | |
| Curry | 9 | 12 | 21 | | 3.50 | 3.69 | 3.50 | | 48 | 21 | 32 | |
| Douglas | 11 | 66 | 66 | | 3.00 | 2.00 | 2.00 | | 200 | 200 | 54 | |
| Grant | 4 | 7 | 175 | 1 | 4.25 | 3.67 | 2.46 | 1.00 | 173 | 240 | 152 | 360 |
| Jackson | 3 | 2 | 90 | 2 | 2.67 | 2.50 | 1.81 | 0.75 | 190 | 190 | 114 | 180 |
| Josephine | 5 | | 114 | | 3.00 | | 2.09 | | 185 | | 137 | |
| Lane | | | | | | | | | | | | |
| Linn | 1 | | 4 | | 2.50 | | 2.00 | | 300 | | 150 | |
| Malheur | | | 42 | | | | 2.00 | | | | 108 | |
| Union | 5 | 22 | 38 | | 3.63 | 3.50 | 2.64 | | 118 | 344 | 210 | |
| Undistributed gold | | | 618 | | | | 2.29 | | | | 130 | |

EMPLOYÉS BELOW GROUND.

[illegible]

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

OREGON—Continued.

| COUNTIES. | EXPENDITURES. | | | | | | | | VALUE OF MINING PROPERTY. | | | | | | |
|--------------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|----------|-------------|---------------------------|---------------------|-----------------------|---------------------|--------------------------------|------------|---------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of railroads on surface. | Machinery. | Underground improvements. |
| | | | | | Males. | | Females. | | | | | | | | |
| | | | | | Number. | Wages paid. | Number. | Wages paid. | | | | | | | |
| Total | \$1,604,781 | \$970,758 | \$909,001 | \$13,997 | 28 | \$47,850 | ..... | ..... | \$549,745 | \$34,278 | \$15,151,203 | \$634,004 | \$28,626 | \$430,403 | \$1,524,368 |
| Baker. | 395,211 | 206,760 | 268,882 | 6,726 | 9 | 21,152 | ..... | ..... | 86,817 | 11,634 | 5,241,536 | 60,269 | 21,240 | 117,988 | 477,723 |
| Columbia. | 120 | 120 | 120 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5,000 | ..... | ..... | ..... | 100 |
| Coos. | 69,678 | 54,458 | 54,458 | ..... | ..... | ..... | ..... | ..... | 15,074 | 146 | 665,760 | 4,015 | ..... | 15,330 | 15,330 |
| Crook. | 375 | 360 | 360 | ..... | ..... | ..... | ..... | ..... | 15 | ..... | ..... | ..... | ..... | ..... | ..... |
| Curry. | 6,591 | 4,365 | 4,365 | ..... | ..... | ..... | ..... | ..... | 2,100 | 126 | 57,780 | 2,310 | ..... | 1,080 | 9,750 |
| Douglas. | 365,456 | 57,071 | 43,791 | ..... | 11 | 13,280 | ..... | ..... | 275,385 | 33,000 | 6,002,150 | 552,200 | 5,500 | 225,590 | 559,090 |
| Grant. | 177,634 | 107,665 | 103,152 | 698 | 2 | 3,815 | ..... | ..... | 47,763 | 22,206 | 915,785 | 4,082 | 1,275 | 38,112 | 171,620 |
| Jackson. | 48,785 | 32,080 | 30,182 | ..... | 1 | 1,898 | ..... | ..... | 15,948 | 757 | 257,324 | 6,006 | 338 | 29,122 | 19,781 |
| Josephine. | 59,128 | 36,265 | 36,265 | ..... | ..... | ..... | ..... | ..... | 15,126 | 7,737 | 579,673 | 11,766 | 273 | 33,496 | 95,593 |
| Lane. | 910 | 710 | 510 | 200 | ..... | ..... | ..... | ..... | 200 | ..... | 1,525 | 100 | ..... | 75 | 1,000 |
| Linn. | 2,500 | 2,000 | 2,000 | ..... | ..... | ..... | ..... | ..... | 500 | ..... | ..... | ..... | ..... | ..... | ..... |
| Malheur. | 14,823 | 10,150 | 9,100 | 1,059 | ..... | ..... | ..... | ..... | 4,323 | 350 | 123,200 | 7,175 | ..... | 4,025 | ..... |
| Union. | 263,570 | 168,754 | 155,816 | 5,233 | 5 | 7,705 | ..... | ..... | 86,494 | 8,322 | 1,301,470 | 36,081 | ..... | 21,675 | 183,471 |
| Undistributed gold | 200,000 | 200,000 | 200,000 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | Num- ber of ani- mals. |
|--------------------|---|-----------------|-----------|-----------------------------------|-----------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|-------------------|--------------|-----------------|-----|---------------------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Machin- ery. | Sup- plies. | Boilers. | | Engines. | | Other power. | Motors. | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | |
| | | | | | | | | | | | | | | | | |
| Total | \$93,116 | \$12,193,130 | \$136,556 | \$1,145,006 | \$447,993 | \$650,183 | \$46,825 | 26 | 811 | 16 | 1,796 | | 34 | 339 | 126 | |
| Baker | 19,797 | 4,542,572 | 1,947 | 378,555 | 216,913 | 144,650 | 16,992 | 9 | 372 | 3 | 297 | | 12 | 133 | 53 | |
| Columbia | 5 | 4,895 | | | | | | | | | | | | | | |
| Coos | 11,242 | 594,293 | 25,550 | | | | | | | | | | | | | |
| Crook | | | | | | | | | | | | | | | | |
| Curry | 1,020 | 43,620 | | | | | | | | | | | | | | |
| Douglas | 24,200 | 4,556,750 | 88,000 | 572,000 | 176,000 | 374,000 | 22,000 | | | | | Water, 11 | 11 | 110 | 22 | |
| Grant | 4,453 | 696,243 | | 78,589 | 12,154 | 64,800 | 1,635 | 7 | 213 | 5 | 245 | | 7 | 70 | 7 | |
| Jackson | 13,166 | 186,727 | 2,184 | | | | | 1 | 10 | 1 | 88 | Various, 10 | | | 2 | |
| Josephine | 8,780 | 416,140 | 13,625 | 5,232 | 1,526 | 3,488 | 218 | 1 | 11 | 1 | 17 | Various, 18 | | | 14 | |
| Lane | 100 | 250 | | | | | | | | | | | | | | |
| Linn | | | | | | | | | | | | | | | | |
| Malheur | 175 | 106,575 | 5,250 | | | | | 3 | 21 | 3 | 56 | | 3 | 21 | | |
| Union | 10,178 | 1,050,065 | | 110,630 | 41,400 | 63,250 | 5,980 | 5 | 184 | 3 | 1,093 | Water, 1 | 1 | 5 | 23 | |
| Undistributed gold | | | | | | | | | | | | | | | | |

SOUTH DAKOTA.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|--------------------|---|---|--|--------------------------|-----------|----------------------|-------------|-----------|--|-----------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| | | | | | | | | | | |
| Total | 963,820 | 3,902 | 936,421 | \$69,668 | \$116,793 | \$3,226,468 | \$3,091,137 | \$135,331 | \$66,184 | \$110,954 |
| Custer ..... | ..... | ..... | ..... | ..... | ..... | 3,500 | 3,500 | ..... | ..... | ..... |
| Lawrence | 962,139 | 3,902 | 934,740 | 69,668 | 116,793 | 2,991,889 | 2,856,558 | 135,331 | 66,184 | 110,954 |
| Pennington | 1,681 | ..... | 1,681 | ..... | ..... | 31,079 | 31,079 | ..... | ..... | ..... |
| Undistributed gold | ..... | ..... | ..... | ..... | ..... | 200,000 | 200,000 | ..... | ..... | ..... |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

SOUTH DAKOTA—Continued.

| COUNTIES. | COINING VALUE OF BULLION PRODUCED FROM ORE TREATED. | | PLACER BULLION. | | Total produc- ing mines reported. | NUMBER OF MINES PRODUCING— | | | | | | |
|--------------------|---|----------|-----------------|---------|--|----------------------------|----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------|--------------------|
| | Gold. | Silver. | Gold. | Silver. | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. | Over \$500,000. |
| Total | \$2,795,453 | \$24,377 | \$29,500 | ..... | 31 | 12 | 6 | C | 3 | ..... | 1 | 3 |
| Custer | | | 3,500 | ..... | 2 | 2 |  |  |  | ..... |  |  |
| Lawrence..... | 2,790,374 | 24,377 |  | ..... | 22 | 4 | 5 | 6 | 3 | ..... | 1 | 3 |
| Pennington | 5,079 | | 26,000 | ..... | 7 | 6 | 1 |  |  | ..... |  |  |
| Undistributed gold |  |  |  | ..... |  |  |  |  |  | ..... |  |  |

| COUNTIES. | EMPLOYÉS ABOVE GROUND. | | | | | | | | | | | |
|--------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 31 | 260 | 554 | ..... | \$4. 57 | \$3. 23 | \$2. 85 | ..... | 272 | 311 | 204 | ..... |
| Custer..... | ..... | ..... | 10 | ..... | ..... | ..... | 2. 84 | ..... | ..... | ..... | 123 | ..... |
| Lawrence..... | 29 | 253 | 107 | ..... | 4. 61 | 3. 22 | 2. 84 | ..... | 282 | 318 | 302 | ..... |
| Pennington..... | 2 | 7 | 94 | ..... | 4. 00 | 3. 50 | 2. 86 | ..... | 126 | 49 | 102 | ..... |
| Undistributed gold | ..... | ..... | 343 | ..... | ..... | ..... | 2. 85 | ..... | ..... | ..... | 204 | ..... |

[illegible][illegible][illegible]

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

TEXAS.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|----------------|---|---|--|--------------------------|-----------|----------------------|----------|------------|--|-----------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| Total | 12, 996 | 1, 355 | 10, 441 | \$7, 183 | \$36, 968 | \$425, 001 | \$6, 828 | \$418, 173 | \$6, 828 | \$82, 620 |
| El Paso | 2, 355 | 1, 355 | ..... | 7, 188 | 86, 968 | 89, 448 | 6, 828 | 82, 620 | 6, 828 | 82, 620 |
| Presidio | 10, 641 | ..... | 10, 441 | ..... | ..... | 335, 553 | ..... | 335, 553 | ..... | ..... |

| COUNTIES. | COINING VALUE OF BULLION PRODUCED FROM ORE TREATED. | | PLACER BULLION. | | Total producing mines reported. | NUMBER OF MINES PRODUCING— | | | | | |
|----------------|---|------------|-----------------|---------|---------------------------------|----------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------------------|
| | Gold. | Silver. | Gold. | Silver. | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. |
| Total | | \$335, 553 | ..... | ..... | 5 | 2 | ..... | ..... | 1 | 2 | ..... |
| El Paso | | | | | 2 | 1 | ..... | ..... | 1 | ..... | ..... |
| Presidio | | 335, 553 | ..... | ..... | 3 | 1 | ..... | ..... | 2 | ..... | ..... |

| COUNTIES. | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
|----------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| | | | | | | | | | | | | |
| Total | 7 | 10 | 36 | ..... | \$4. 62 | \$2. 83 | \$2. 07 | ..... | 130 | 174 | 147 | ..... |
| El Paso | 1 | 5 | 4 | ..... | 3. 00 | 1. 85 | 2. 50 | ..... | 100 | 193 | 100 | ..... |
| Presidio | 6 | 5 | 32 | ..... | 4. 89 | 3. 80 | 2. 02 | ..... | 135 | 154 | 153 | ..... |

| COUNTIES. | EMPLOYÉS BELOW GROUND. | | | | | | | | | | | | Total number of mines. | Number of producing mines. | Mines working but not producing. | Number of mines idle. |
|----------------|--------------------------|---------|-----------|----------------------|------------------------|---------|-----------|----------------------|--|---------|-----------|----------------------|------------------------|----------------------------|----------------------------------|-----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | | | | | |
| | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | | | | |
| Total | 5 | 78 | 192 | ..... | \$2.60 | \$1.27 | \$1.25 | ..... | 163 | 175 | 156 | ..... | 10 | 5 | 1 | 4 |
| El Paso..... | 4 | 60 | 6 | ..... | 2.50 | 1.25 | 1.10 | ..... | 193 | 193 | 193 | ..... | 5 | 2 | ..... | 3 |
| Presidio | 1 | 18 | 186 | ..... | 3.00 | 1.33 | 1.25 | ..... | 41 | 114 | 155 | ..... | 5 | 3 | 1 | 1 |

| COUNTIES. | EXPENDITURES. | | | | | | | | | | VALUE OF MINING PROPERTY. | | | | |
|----------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|----------|-------------|--------------------|---------------------|---------------------------|----------------------|---------------------------------|-------------|-----------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of build-ings. | Value of rail-roads on surface. | Machin-ery. | Under-ground improve-ments. |
| | | | | | Males. | | Females. | | | | | | | | |
| | | | | | Num-ber. | Wages paid. | Num-ber. | Wages paid. | | | | | | | |
| Total | \$205, 808 | \$82, 586 | \$76, 146 | \$270 | 5 | \$6, 170 | ..... | ..... | \$17, 602 | \$105, 620 | \$405, 292 | \$7, 900 | ..... | \$9, 200 | \$25, 000 |
| El Paso..... | 23, 355 | 21, 621 | 20, 731 | 270 | 2 | 620 | ..... | ..... | 1, 634 | 100 | 200, 000 | 3, 200 | ..... | 3, 200 | 15, 000 |
| Presidio | 182, 453 | 60, 965 | 55, 415 | ..... | 3 | 5, 550 | ..... | ..... | 15, 968 | 105, 520 | 205, 292 | 4, 700 | ..... | 6, 000 | 10, 000 |

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | Number of animals. |
|----------------|---|-----------------|----------|-----------------------------------|-----------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|------------------|--------------|-----------------|----|--------------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Machin- ery. | Sup- plies. | Boilers. | | Engines. | | Other power. | Motors. | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | |
| Total | \$4, 192 | \$357, 000 | \$2, 000 | \$49, 560 | \$10, 000 | \$20, 000 | \$19, 560 | 2 | 20 | 2 | 66 | ..... | 6 | ..... | 31 | |
| El Paso..... | 600 | 178, 000 | ..... | ..... | ..... | ..... | ..... | 2 | 20 | 2 | 66 | ..... | ..... | ..... | 20 | |
| Presidio | 3, 592 | 179, 000 | 2, 000 | 49, 560 | 10, 000 | 20, 000 | 19, 560 | ..... | ..... | ..... | ..... | Windlass, 1..... | 6 | ..... | 11 | |

MINERAL INDUSTRIES IN THE UNITED STATES.

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

UTAH.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|--------------------------|---|---|--|--------------------------|-------------|----------------------|-----------|-------------|--|-------------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| Total | 214,548 | 125,051 | 64,818 | \$406,312 | \$6,373,380 | \$9,544,680 | \$487,666 | \$9,057,014 | \$387,390 | \$6,809,871 |
| Beaver | 12,942 | 12,771 | 114 | 54 | 380,950 | 363,322 | 327 | 362,995 | 51 | 361,902 |
| Boxelder | | | | | | | | | | |
| Juab | 52,251 | 52,183 | | 224,333 | 3,051,903 | 3,112,422 | 213,115 | 2,899,307 | 213,115 | 2,899,307 |
| Piute | 174 | | | | | 8,995 | 1,395 | 7,600 | 1,395 | 7,600 |
| Salt Lake | 49,836 | 35,482 | | 77,776 | 645,648 | 687,263 | 73,887 | 613,376 | 73,887 | 613,376 |
| Summit | 82,537 | 20,647 | 58,323 | 92,941 | 2,213,081 | 5,029,083 | 88,294 | 4,940,789 | 88,294 | 2,850,964 |
| Tooele | 12,595 | 3,948 | 2,268 | 11,208 | 79,693 | 124,157 | 10,648 | 113,509 | 10,648 | 74,722 |
| Wasatch | 100 | 20 | | | 2,105 | 2,000 | | 2,000 | | 2,000 |
| Washington | 4,113 | | 4,113 | | | 117,438 | | 117,438 | | |
| Undistributed gold | | | | | | 100,000 | 100,000 | | | |

| COUNTIES. | COINING VALUE OF BULLION PRODUCED FROM ORE TREATED. | | PLACER BULLION. | | Total producing mines reported. | NUMBER OF MINES PRODUCING— | | | | | | |
|--------------------------|---|-------------|-----------------|---------|---------------------------------|----------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------------------|-----------------|
| | Gold. | Silver. | Gold. | Silver. | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. | Over \$500,000. |
| Total | \$276 | \$2,247,143 | | | 66 | 9 | 21 | 19 | 3 | 7 | 3 | 4 |
| Beaver | 276 | 1,093 | | | 4 | 3 | | | | | 1 | |
| Boxelder | | | | | | | | | | | | |
| Juab | | | | | 16 | | 5 | 4 | 2 | 2 | 1 | 2 |
| Piute | | | | | 2 | 1 | 1 | | | | | |
| Salt Lake | | | | | 22 | 1 | 9 | 9 | 1 | 2 | | |
| Summit | | 2,089,825 | | | 9 | | | 2 | | 2 | 1 | 2 |
| Tooele | | 38,787 | | | 10 | 3 | 3 | 4 | | | | |
| Wasatch | | | | | 1 | | 1 | | | | | |
| Washington | | 117,438 | | | 2 | 1 | | | | 1 | | |
| Undistributed gold | | | | | | | | | | | | |

EMPLOYÉS ABOVE GROUND.

| COUNTIES. | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
|--------------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 85 | 171 | 475 | 2 | \$5.27 | \$3.83 | \$3.14 | \$1.00 | 307 | 319 | 311 | 365 |
| Beaver | | 6 | 5 | | | 3.50 | 2.69 | | | 341 | 176 | |
| Boxelder | | | | | | | | | | | | |
| Juab | 54 | 81 | 41 | | 5.39 | 4.00 | 3.00 | | 310 | 327 | 270 | |
| Piute | | | 1 | | | | 3.00 | | | | 30 | |
| Salt Lake | 10 | 22 | 43 | 2 | 5.14 | 3.63 | 2.85 | 1.00 | 321 | 296 | 279 | 365 |
| Summit | 15 | 40 | 189 | | 5.25 | 4.14 | 3.31 | | 316 | 353 | 354 | |
| Tooele | 2 | 11 | 16 | | 4.00 | 3.65 | 3.00 | | 218 | 270 | 302 | |
| Wasatch | 2 | 5 | 13 | | 4.25 | 4.20 | 2.50 | | 225 | 210 | 185 | |
| Washington | 2 | 6 | 12 | | 5.00 | 3.50 | 3.00 | | 240 | 240 | 105 | |
| Undistributed gold | | | 155 | | | | 3.14 | | | | 311 | |

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UTAH—Continued.

[illegible]

MINERAL INDUSTRIES IN THE UNITED STATES.

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

WASHINGTON.

| COUNTIES. | Total amount of ore produced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRODUCED FROM ORE SOLD. | |
|-----------------------------------|--|--|---|--------------------------|-----------|----------------------|------------|-----------|--|-----------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| Total | 3, 026 | 83 | 361 | \$20, 341 | \$38, 354 | \$222, 651 | \$186, 150 | \$36, 801 | \$19, 324 | \$36, 937 |
| Asotin | | | | | | 1, 500 | 1, 500 | | | |
| Kittitas | 370 | | 350 | | | 10, 822 | 10, 822 | | | |
| Okanogan | 2, 101 | 14 | 9 | 5, 007 | 15, 827 | 20, 157 | 4, 757 | 15, 400 | 4, 757 | 15, 536 |
| Snohomish | | | | 316 | 204 | 494 | 300 | 194 | 300 | 194 |
| Stevens | 1, 155 | 69 | 2 | 15, 018 | 22, 323 | 35, 478 | 14, 271 | 21, 207 | 14, 267 | 21, 207 |
| Walla Walla | | | | | | 2, 500 | 2, 500 | | | |
| Whitman | | | | | | 2, 000 | 2, 000 | | | |
| Undistributed gold, placer mines. | | | | | | 150, 000 | 150, 000 | | | |

| COUNTIES. | COINING VALUE OF BULLION PRODUCED FROM ORE TREATED. | | PLACER BULLION. | | Total producing mines reported. | NUMBER OF MINES PRODUCING— | | | | | | |
|-----------------------------------|---|---------|-----------------|---------|---------------------------------|----------------------------|------------------------|-------------------------|--------------------------|---------------------------|---------------------------|------------------|
| | Gold. | Silver. | Gold. | Silver. | | Less than \$1, 000. | \$1, 000 to \$10, 000. | \$10, 000 to \$50, 000. | \$50, 000 to \$100, 000. | \$100, 000 to \$250, 000. | \$250, 000 to \$500, 000. | Over \$500, 000. |
| Total | \$4, 504 | \$364 | \$162, 322 | | 70 | 65 | 4 | 1 | | | | |
| Asotin | | | 1, 500 | | 5 | 5 | | | | | | |
| Kittitas | 4, 500 | | 6, 322 | | 13 | 11 | 2 | | | | | |
| Okanogan | | 364 | | | 13 | 11 | 2 | | | | | |
| Snohomish | | | | | 1 | 1 | | | | | | |
| Stevens | 4 | | | | 23 | 22 | | 1 | | | | |
| Walla Walla | | | 2, 500 | | 8 | 8 | | | | | | |
| Whitman | | | 2, 000 | | 7 | 7 | | | | | | |
| Undistributed gold, placer mines. | | | 150, 000 | | | | | | | | | |

| COUNTIES. | EMPLOYÉS ABOVE GROUND. | | | | | | | | | | | |
|-----------------------------------|--------------------------|------------|-----------|----------------------|------------------------|------------|-----------|----------------------|--|------------|-----------|----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 3 | 3 | 394 | | \$5. 00 | \$4. 00 | \$3. 00 | | 221 | 280 | 139 | |
| Asotin | | | 4 | | | | 3. 00 | | | | 125 | |
| Kittitas | | | 24 | | | | 2. 69 | | | | 111 | |
| Okanogan | 2 | 3 | 19 | | 5. 00 | 4. 00 | 3. 34 | | 211 | 280 | 164 | |
| Snohomish | | | | | | | | | | | | |
| Stevens | 1 | | 3 | | 5. 00 | | 3. 00 | | 240 | | 240 | |
| Walla Walla | | | 6 | | | | 3. 00 | | | | 139 | |
| Whitman | | | 5 | | | | 3. 00 | | | | 133 | |
| Undistributed gold, placer mines. | | | 333 | | | | 3. 00 | | | | 139 | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

WASHINGTON—Continued.

| COUNTIES. | EMPLOYÉS BELOW GROUND. | | | | | | | | | | | | Total number of mines. | Number of producing mines. | Mines working but not producing. | Number of mines idle. |
|-----------------------------------|--------------------------|---------|-----------|----------------------|------------------------|---------|-----------|----------------------|--|---------|-----------|----------------------|------------------------|----------------------------|----------------------------------|-----------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | | | | | |
| | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | Foremen or overseers. | Miners. | Laborers. | Boys under 16 years. | | | | |
| Total..... | 8 | 187 | 7 | | \$4.69 | \$3.43 | \$3.28 | | 124 | 134 | 154 | | 86 | 70 | 7 | 9 |
| Asotin..... | | | | | | | | | | | | | 5 | 5 | | |
| Kittitas..... | 1 | 2 | 1 | | 3.00 | 2.50 | 3.00 | | 135 | 135 | 135 | | 19 | 13 | 1 | 5 |
| Okanogan..... | 2 | 87 | 6 | | 6.00 | 3.55 | 3.33 | | 210 | 154 | 157 | | 15 | 13 | 1 | 1 |
| Snohomish..... | 1 | 2 | | | 4.50 | 2.00 | | | 30 | 30 | | | 3 | 1 | 1 | 1 |
| Stevens..... | 4 | 96 | | | 4.50 | 3.37 | | | 102 | 118 | | | 29 | 23 | 4 | 2 |
| Wallawalla..... | | | | | | | | | | | | | 8 | 8 | | |
| Whitman..... | | | | | | | | | | | | | 7 | 7 | | |
| Undistributed gold, placer mines. | | | | | | | | | | | | | | | | |

| COUNTIES. | EXPENDITURES. | | | | | | | | VALUE OF MINING PROPERTY. | | | | | | |
|-----------------------------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|----------|-------------|---------------------------|---------------------|-----------------------|---------------------|--------------------------------|------------|---------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of buildings. | Value of railroads on surface. | Machinery. | Underground improvements. |
| | | | | | Males. | | Females. | | | | | | | | |
| | | | | | Number. | Wages paid. | Number. | Wages paid. | | | | | | | |
| Total..... | \$328,816 | \$282,759 | \$277,859 | \$2,500 | 1 | \$2,400 | | | \$35,320 | \$10,737 | \$3,536,925 | \$10,520 | \$500 | \$14,765 | \$399,840 |
| Asotin..... | 1,500 | 1,500 | 1,500 | | | | | | | | | | | | |
| Kittitas..... | 11,864 | 5,304 | 5,304 | | | | | | 2,235 | 4,325 | 314,440 | 2,095 | 400 | 4,175 | 50,640 |
| Okanogan..... | 92,381 | 70,814 | 68,414 | | 1 | 2,400 | | | 21,060 | 507 | 1,558,565 | 4,500 | | 7,185 | 131,500 |
| Snohomish..... | 6,400 | 3,300 | 3,300 | | | | | | 3,050 | 50 | 74,750 | 500 | | 50 | 8,200 |
| Stevens..... | 62,171 | 47,341 | 44,841 | 2,500 | | | | | 8,975 | 5,855 | 1,589,170 | 3,425 | 100 | 3,355 | 209,500 |
| Wallawalla..... | 2,500 | 2,500 | 2,500 | | | | | | | | | | | | |
| Whitman..... | 2,000 | 2,000 | 2,000 | | | | | | | | | | | | |
| Undistributed gold, placer mines. | 150,000 | 150,000 | 150,000 | | | | | | | | | | | | |

| COUNTIES. | VALUE OF MINING PROPERTY—continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | Number of animals. |
|-----------------------------------|-------------------------------------|--------------|---------|-----------------------------------|------------|------------|-----------|---------------|--------------|----------|--------------|--------------------|---------|--------------|----|--------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Buildings. | Machinery. | Supplies. | Boilers. | | Engines. | | Other power. | Motors. | | | |
| | | | | | | | | Number. | Horse power. | Number. | Horse power. | | Number. | Horse power. | | |
| Total..... | \$6,260 | \$3,103,040 | \$2,000 | \$34,550 | \$18,650 | \$11,900 | \$4,000 | 2 | 30 | 2 | 21 | | 12 | 81 | 19 | |
| Asotin..... | | | | | | | | | | | | | | | | |
| Kittitas..... | 330 | 256,800 | | 5,900 | 2,000 | 3,900 | | | | | | Water..... | 6 | 81 | 12 | |
| Okanogan..... | 3,580 | 1,409,800 | 2,000 | 28,650 | 16,650 | 8,000 | 4,000 | 2 | 30 | 2 | 21 | Windlasses, 2..... | 3 | | 2 | |
| Snohomish..... | | 66,000 | | | | | | | | | | Whim, 1..... | | | | |
| Stevens..... | 2,350 | 1,370,440 | | | | | | | | | | Water..... | | | | |
| Wallawalla..... | | | | | | | | | | | | Windlaas, 1..... | 3 | | 5 | |
| Whitman..... | | | | | | | | | | | | Whims, 2..... | | | | |
| Undistributed gold, placer mines. | | | | | | | | | | | | | | | | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

WYOMING.

| COUNTIES. | Total amount of ore pro- duced. (Short tons.) | Total amount of ore sold. (Short tons.) | Total amount of ore treated. (Short tons.) | ASSAY VALUE OF ORE SOLD. | | TOTAL BULLION VALUE. | | | ESTIMATED COINING VALUE OF BULLION PRO- DUCED FROM ORE SOLD. | |
|---------------|---|--|---|--------------------------|---------|-------------------------|----------|---------|--|---------|
| | | | | Gold. | Silver. | Grand total bullion. | Gold. | Silver. | Gold. | Silver. |
| Total | 1,336 | | 890 | | | \$14,512 | \$14,512 | | | |
| Albany | 525 | | 250 | | | 6,172 | 6,172 | | | |
| Carbon | 10 | | | | | | | | | |
| Crook | | | | | | | | | | |
| Fremont | 701 | | 640 | | | 8,340 | 8,340 | | | |
| Laramie | 100 | | | | | | | | | |

| COUNTIES. | COINING VALUE OF BULLION PRODUCED FROM ORE TREATED. | | PLACER BULLION. | | Total produc- ing mines reported. | NUMBER OF MINES PRODUCING— | | | | | | |
|---------------|---|---------|-----------------|---------|--|----------------------------|----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------|--------------------|
| | Gold. | Silver. | Gold. | Silver. | | Less than \$1,000. | \$1,000 to \$10,000. | \$10,000 to \$50,000. | \$50,000 to \$100,000. | \$100,000 to \$250,000. | \$250,000 to \$500,000. | Over \$500,000. |
| Total | \$13,340 | | \$1,172 | | 11 | 7 | 4 | | | | | |
| Albany | 5,000 | | 1,172 | | 6 | 5 | 1 | | | | | |
| Carbon | | | | | | | | | | | | |
| Crook | | | | | | | | | | | | |
| Fremont | 8,340 | | | | 5 | 2 | 3 | | | | | |
| Laramie | | | | | | | | | | | | |

| COUNTIES. | EMPLOYÉS ABOVE GROUND. | | | | | | | | | | | |
|---------------|--------------------------|------------|-----------|----------------------------|--------------------------|------------|-----------|----------------------------|--|------------|-----------|----------------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | |
| | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. | Foremen or overseers. | Mechanics. | Laborers. | Boys under 16 years. |
| Total | 14 | 7 | 51 | | \$3.86 | \$3.07 | \$2.36 | | 105 | 56 | 81 | |
| Albany | 10 | 5 | 37 | | 3.80 | 2.70 | 2.38 | | 111 | 62 | 63 | |
| Carbon | | | | | | | | | | | | |
| Crook | | | 1 | | | | 3.00 | | | | 35 | |
| Fremont | 4 | 2 | 11 | | 4.00 | 4.00 | 2.32 | | 91 | 40 | 158 | |
| Laramie | | | 2 | | | | 2.50 | | | | 10 | |

| COUNTIES. | EMPLOYÉS BELOW GROUND. | | | | | | | | | | | | Total number of mines. | Number of pro- ducing mines. | Mines working but not pro- ducing. | Number of mines idle. |
|---------------|------------------------------------|---------|----------------|-------------------------------|-------------------------------|---------|----------------|-------------------------------|---|---------|----------------|-------------------------------|---------------------------------|--|--|-----------------------------|
| | Average number employed. | | | | Average wages per day. | | | | Average number of days worked during year. | | | | | | | |
| | Fore- men or over- seers. | Miners. | Labor- ers. | Boys under 16 years. | Foremen or over- seers. | Miners. | Labor- ers. | Boys under 16 years. | Fore- men or over- seers. | Miners. | Labor- ers. | Boys under 16 years. | | | | |
| Total | 13 | 130 | 11 | | \$4.84 | \$3.05 | \$2.36 | | 80 | 58 | 108 | | 56 | 11 | 41 | |
| Albany | 3 | 57 | 8 | | 4.67 | 2.98 | 2.25 | | 62 | 61 | 82 | | 15 | 6 | 9 | |
| Carbon | | 10 | | | | 3.20 | | | | 68 | | | 4 | | 3 | |
| Crook | | 1 | | | | 3.00 | | | | 40 | | | 3 | | 2 | |
| Fremont | 9 | 39 | 1 | | 4.88 | 3.03 | 4.00 | | 68 | 33 | 50 | | 21 | 5 | 15 | |
| Laramie | 1 | 23 | 2 | | 5.00 | 3.17 | 2.00 | | 240 | 87 | 240 | | 13 | | 12 | |

GOLD AND SILVER STATISTICS OF THE WESTERN STATES AND TERRITORIES—Continued.

WYOMING—Continued.

| COUNTIES. | EXPENDITURES. | | | | | | | | | VALUE OF MINING PROPERTY. | | | | | |
|---------------|------------------------------|-----------------------|---------------------------|----------------------|---------------|-------------|----------|-------------|--------------------|---------------------------|-----------------------|----------------------|---------------------------------|-------------|-----------------------------|
| | Grand total of expenditures. | Grand total of wages. | Total wages paid in 1889. | Paid to contractors. | Office force. | | | | Value of supplies. | Other expenditures. | Total value of plant. | Value of build-ings. | Value of rail-roads on surface. | Machin-ery. | Under-ground improve-ments. |
| | | | | | Males. | | Females. | | | | | | | | |
| | | | | | Num-ber. | Wages paid. | Num-ber. | Wages paid. | | | | | | | |
| Total | \$80,712 | \$50,835 | \$45,945 | \$1,305 | 5 | \$3,525 | 1 | \$60 | \$24,133 | \$5,684 | \$2,361,017 | \$19,745 | \$1,600 | \$121,550 | \$335,982 |
| Albany | 42,469 | 25,392 | 22,702 | 1,130 | 2 | 1,500 | 1 | 60 | 11,972 | 5,105 | 409,670 | 7,850 | 1,100 | 14,900 | 141,200 |
| Carbon | 2,200 | 1,970 | 1,970 | ..... | ..... | ..... | ..... | ..... | 30 | 200 | 80,200 | 850 | ..... | 200 | 19,000 |
| Crook | 250 | 225 | 225 | ..... | ..... | ..... | ..... | ..... | 25 | ..... | 11,000 | 200 | ..... | ..... | 1,500 |
| Fremont | 25,637 | 15,061 | 12,961 | 75 | 3 | 2,025 | ..... | ..... | 10,340 | 236 | 1,070,147 | 7,695 | 500 | 105,890 | 109,612 |
| Laramie | 10,156 | 8,187 | 8,087 | 100 | ..... | ..... | ..... | ..... | 1,826 | 143 | 790,000 | 3,150 | ..... | 650 | 64,670 |

| COUNTIES. | VALUE OF MINING PROPERTY— continued. | | | VALUE OF MILL OR REDUCTION WORKS. | | | | MOTIVE POWER. | | | | | | | | Num- ber of ani- mals. |
|---------------|---|-----------------|-------|-----------------------------------|-----------------|-----------------|-----------|---------------|-----------------|--------------|-----------------|--|--------------|-----------------|-------|------------------------------------|
| | Mine supplies. | Mine proper. | Cash. | Total. | Build- ings. | Machin- ery. | Supplies. | Boilers. | | Engines. | | Other power. | Motors. | | | |
| | | | | | | | | Num- ber. | Horse power. | Num- ber. | Horse power. | | Num- ber. | Horse power. | | |
| | | | | | | | | | | | | | | | | |
| Total | \$13,515 | \$1,868,444 | \$181 | \$130,575 | \$27,425 | \$102,600 | \$550 | 8 | 378 | 12 | 449 | ..... | 7 | 70 | 39 | |
| Albany | 4 885 | 239,554 | 181 | 30,000 | 10,000 | 20,000 | ..... | 3 | 110 | 6 | 207 | ..... | ..... | ..... | 18 | |
| Carbon | 100 | 60,050 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 6 | |
| Crook | 70 | 9,230 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |
| Fremont | 8,975 | 838,465 | ..... | 78,575 | 7,425 | 70,000 | 550 | 4 | 208 | 4 | 177 | Water wheels, 4. Whim, 1..... Windlass, 1..... Whim, 1..... | 7 | 70 | 18 | |
| Laramie | 385 | 721,145 | ..... | 22,000 | 10,000 | 12,000 | ..... | 1 | 60 | 2 | 65 | | | | | |

NOTES ON THE CONDITION OF GOLD AND SILVER MINING.

Since the distribution of the production by states has not heretofore been very accurate, it is not possible to draw exact conclusions from a comparison of these figures with the output by states in earlier years, but some general lessons can be learned from them.

In Alabama, and in fact in all the eastern states, the gold production has not increased to any noticeable extent. The ores thus far worked have been chiefly low-grade "free-milling" ores, which have contributed but a small addition to the stock of gold. Since the reduction in the cost of treatment of gold-bearing pyritic ores, effected by improvements in metallurgical processes referred to in another part of this report, it is probable that the eastern states will increase their output, though perhaps not their relative importance as gold-producing states.

APPALACHIAN RANGE: STATES OF VIRGINIA, NORTH CAROLINA, SOUTH CAROLINA, GEORGIA, AND ALABAMA.

In the states of the Appalachian range the majority of mines are small placer and river mines, producing insignificant amounts of gold. Of the mines listed in these states only 1 produced over \$30,000 worth of bullion in the year 1889, 2 between \$20,000 and \$30,000, 4 between \$10,000 and \$20,000, 6 between \$5,000 and \$10,000, 11 between \$1,000 and \$5,000, and 47 less than \$1,000 each. These 71 mines are distributed among the states as follows: Alabama, 6; Georgia, 22; North Carolina, 31; South Carolina, 7; Virginia, 5. Besides these mines there is a large number of small placers classed as petty mines, the production of which does not reach \$100 each. The original list of names and addresses of mines to which schedules and letters asking for information were sent was so imperfect that only 16 schedules were received by mail direct from the owners of mines. These gave the statistics of the largest producing mines. Arrangements were made with Mr. Stuart W. Cramer, assayer in charge of the United States mint at Charlotte, North Carolina, to undertake a more thorough collection of the statistics of these states than could be done by mailing schedules to the owners of the mines. The following is an abstract from his final report:

All mining that was not properly developing, or that which was so small that the production of bullion did not exceed \$100 in value, has been included as petty mining. This petty mining also embraces the work by private individuals of handling the tailings from the larger mines. This was done so that the tables of cost, etc., would not be in error.

Attention should be called to the fact that certain managers reported (1) their net production, that is, what they get for it from the mint or assay office, not their gross output; (2) others sent their gross output, and (3) still others sent reports of output including petty work done on their property by private individuals, as reworking the tailings, etc., which is here classed as petty work. The figures on the detailed statement are correct, as will be seen by the close comparison with the estimate of the director of the mint (see pages 20 and 21 of the director's report). The data concerning the petty mining are included. This will be found very accurate as an average, though, of course, some localities have produced more and others less than that given. In the work use has been made not only of all the data that could be obtained from mine owners, managers, etc., but of the reports from all the mints and assay offices in detail, and also of all the data collected during a trip of 6 weeks spent in compiling the report on the production of the precious metals for my district; also all the data available from past experience with the section were used. To supplement and verify the foregoing all the important mining centers were visited by the special agent.

PRODUCTION, BY COUNTIES, OF THE APPALACHIAN STATES: NORTH CAROLINA, SOUTH CAROLINA, VIRGINIA, GEORGIA, AND ALABAMA.

| COUNTIES. | Mines. | Amount. | COUNTIES. | Mines. | Amount. |
|--------------------------------------|-------------------|---------|---------------------------------------|-------------------|---------|
| NORTH CAROLINA..... | | | SOUTH CAROLINA..... | | |
| \$150,674 | | | \$47,035 | | |
| Burke..... | Petty mining..... | 8,384 | Chesterfield..... | Petty mining..... | 110 |
| Cabarrus..... | 2 mines..... | 15,500 | Chesterfield and Lancaster..... | 2 mines..... | 42,273 |
| Caldwell..... | Petty mining..... | 4,386 | Spartanburg..... | Petty mining..... | 669 |
| Clay and Franklin..... | Petty mining..... | 215 | Union..... | do..... | 135 |
| Cleveland..... | 1 mine..... | 180 | State, miscellaneous..... | | 3,893 |
| Cleveland, Randolph, and Stanly..... | Petty mining..... | 1,000 | | | |
| Davidson..... | Petty mining..... | 411 | GEORGIA..... | | |
| Guilford..... | 3 mines..... | 45,386 | 103,069 | | |
| Henderson..... | Petty mining..... | 1,242 | Carroll..... | Petty mining..... | 315 |
| Iredell..... | Petty mining..... | 100 | Cherokee, Haralson, and McDuffie..... | 3 mines..... | 18,165 |
| Jackson..... | do..... | 419 | | Petty mining..... | 638 |
| Lincoln..... | do..... | 214 | Dawson..... | do..... | 643 |
| McDowell..... | do..... | 98 | Forsyth..... | do..... | 130 |
| Macon..... | do..... | 150 | Habersham..... | do..... | 895 |
| Mecklenburg..... | 1 mine..... | 622 | Hall..... | do..... | 750 |
| Montgomery..... | Petty mining..... | 7,586 | Lumpkin..... | 7 mines..... | 27,414 |
| Moore..... | do..... | 400 | | Petty mining..... | 14,832 |
| Nash..... | 3 mines..... | 1,553 | Rabun..... | do..... | 1,041 |
| Polk..... | Petty mining..... | 5,051 | Warren..... | do..... | 88 |
| Randolph..... | 6 mines..... | 24,924 | White..... | 3 mines..... | 23,318 |
| Rutherford..... | 2 mines..... | 2,295 | | Petty mining..... | 3,055 |
| Rowan..... | Petty mining..... | 3,033 | Wilkes..... | do..... | 104 |
| Union..... | do..... | 761 | State, miscellaneous..... | | 16,618 |
| Warren..... | do..... | 59 | | | |
| State, miscellaneous..... | do..... | 1,664 | ALABAMA..... | | |
| | 2 mines..... | 1,897 | 2,639 | | |
| | Petty mining..... | 2,465 | Clay..... | Petty mining..... | 862 |
| | 3 mines..... | 9,157 | Cleburne and Tallapoosa..... | | 777 |
| | Petty mining..... | 500 | State, miscellaneous..... | | 1,000 |
| | | 11,022 | | | |

VIRGINIA.

The production of this state is so small and uncertain that it is impossible to locate it with any degree of accuracy, and therefore it is simply classified as "miscellaneous".

ESTIMATES OF COST OF PETTY MINING, ETC., IN VIRGINIA.

| | |
|--|----------|
| Amount of petty mining in bullion yield..... | \$4,113 |
| Number of men engaged therein..... | 30 |
| Average number of days worked during the year..... | 90 |
| Total cost of supplies..... | \$100 |
| Rent, taxes, etc., of the properties worked..... | \$300 |
| Probable value of the properties..... | \$50,000 |
| Probable value of the machinery and plant..... | \$7,500 |
| Estimated daily earnings of the petty miners..... | \$0.74 |
| Estimated yearly tribute of the property owners..... | \$1,235 |

ESTIMATES OF COST OF PETTY MINING, ETC., IN ALABAMA.

| | |
|--|----------|
| Amount of petty mining in bullion yield..... | \$2,639 |
| Number of men engaged therein..... | 25 |
| Average number of days worked during the year..... | 100 |
| Average daily earnings of the miners..... | \$0.75 |
| Probable cost of these operations..... | \$1,800 |
| Probable value of the properties..... | \$60,000 |